

Ethnobotanical analysis in the Amalfi Coast and evaluation of results on a scientific and economic point of view

Analisi etnobotanica della Costiera amalfitana e valutazione dei risultati da un punto di vista scientifico ed economico



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SUMMARY OF THE RESEARCH PROJECT IN ITALIAN

L'Etnobotanica è lo studio del rapporto tra uomo e piante, incluso in un sistema dinamico in cui siano inclusi fattori sociali e naturali. Inoltre, gli usi delle piante e le relazioni uomo-piante sono modellate dalla storia, dall'ambiente sociale e fisico e dalle caratteristiche intrinseche delle stesse piante (Alcorn, 1995).

Alcuni luoghi si dimostrano particolarmente adatti per svolgervi delle indagini etnobotaniche, nel caso essi siano per esempio caratterizzati da una lunga tradizione storica e da un ambiente naturale preservato.

La Costiera amalfitana è stata da sempre caratterizzata da uno stretto rapporto tra i suoi abitanti e il territorio, e da un "territorio culturale" (tipizzato dai terrazzamenti) di importanza riconosciuta internazionalmente essendo un "World Heritage Site" (UNESCO, 1997). Il valore visivo scenico di questo paesaggio è soltanto uno delle componenti che rendono quest'area così importante: la biodiversità è piuttosto elevata (Cancellieri *et al.*, 2007; Salerno *et al.*, 2007), i suoi monumenti e rovine storiche, la sua tradizione e folklore costituiscono uno scenario unico. Malgrado questi fattori, nella Costiera amalfitana le ricerche di tipo etnobotanico sono poche e limitate ai soli aspetti etnofarmacologici (De Feo *et al.*, 1992; De Feo and Senatore, 1993).

L'obiettivo principale di questo progetto è quello di documentare ed analizzare le conoscenze etnobotaniche della Costiera amalfitana con la finalità di preservare queste preziose conoscenze e valutarne le possibili applicazioni economiche attraverso un modello che comprenda i fattori che, interagendo, possano modificare il paesaggio a seguito dei cambiamenti di uso del suolo dovuti all'introduzione di una coltivazione di specie locali.

La strutturazione del progetto con la metodologia associata a ciascuno step è qui di seguito riportata:

1. E' stata svolta una ricerca preliminare sugli studi di tipo etnobotanico per trovare un'adeguata metodologia per la raccolta e l'analisi del dato e per trovare informazioni su studi etnobotanici in Italia ed altri paesi del Mediterraneo. Di conseguenza è stato prodotto un ampio database su ricerche etnobotaniche che è stato poi reso accessibile on line come open source sul sito dell'*Ethnobotany Research and Application Journal* (E.R.A., 2009) (primo passo dell'anno I).

2. Sono state programmate delle uscite di campo nell'area di studio con l'obiettivo di raccogliere dati sugli usi etnobotanici. Sono stati svolte 214 interviste durante 11 missioni (48 giorni) in Costiera amalfitana a partire dall'aprile del 2007 a settembre 2009. Sono state visitati tutti i comuni del Sito UNESCO Costa d'Amalfi aggiungendo a questi anche il comune di Agerola. Gli informatori sono stati scelti casualmente poiché uno degli obiettivi di questa ricerca era quello di valutare la diffusione delle conoscenze etnobotaniche tra la popolazione (Pieroni, 2000). Dopo aver ottenuto un esplicito consenso (Guarrera *et al.*, 2005; Pieroni *et al.*, 2005a) sono stati raccolti dati personali sugli

informatori e sugli usi locali con delle interviste semi-strutturate basate su dei questionari preformati. Le interviste sono state condotte sia mostrando delle piante fresche che senza. Le informazioni ottenute in questi due modi sono state considerate differentemente per alcune elaborazioni. Le piante menzionate dagli informatori sono state raccolte ed i campioni sono stati depositati presso l'*Herbarium* dell'Università di Roma Tre. Le piante raccolte sono state identificate utilizzando la "Flora d'Italia" (Pignatti, 2003) e la nomenclatura delle specie è stata aggiornata (Tropicos.org, 2009; IPNI.org, 2009; Conti *et al.*, 2005; 2007). Gli usi tradizionali sono stati classificati in più categorie [per esempio: usi aromatici (AR), alimentazione umana (HN), usi domestico-artigianali (H), usi medicinali (MED), ecc.]. (anni I, II, III).

3. I dati sono stati analizzati con lo scopo di:

- valutare la conoscenza etnobotanica nell'area e la sua distribuzione (considerando l'età, il sesso, i fattori geografici). La perdita, ma anche l'entità, delle conoscenze etnobotaniche nella Costiera amalfitana sono state valutate considerando il numero ed il tipo di citazioni in relazione ad età e sesso degli informatori, l'attualità e la frequenza degli usi delle piante (anni II, III);
- comparare i dati etnobotanici della Costiera amalfitana con quelli ottenuti da altri studi, presi da letteratura italiana ed internazionale, con lo scopo di ipotizzare relazioni culturali all'interno del bacino del Mediterraneo (anno II, III);
- valutare l'impatto economico di alcune piante utilizzate tradizionalmente considerando un modello biocomplesso che integri elementi del paesaggio ed alcuni concetti economici e di marketing (Cicia and Scarpa, 2004; Tempesta, 2005; Pratesi and Mattia, 2006). E' stata ipotizzata la struttura di un modello comprendente tutte le componenti del paesaggio culturale della Costiera amalfitana in cui sono considerati sia elementi/fattori naturali ed umani, interagenti nel tempo e nello spazio (Pickett *et al.*, 2005). Questo modello biocomplesso include delle ipotesi di impatto di una coltivazione di specie locali e potrebbe essere utilizzato per azioni di pianificazione (anno III).

Sono state indicate molte piante di utilizzo etnobotanico (179 specie, sia selvatiche che coltivate); è stata comunque evidenziata una progressiva scomparsa delle conoscenze tradizionali delle piante poiché le generazioni più giovani (età tra i 20 e i 40 anni) hanno citato una media di 6,8 piante, mentre persone appartenenti alla categoria intermedia di età (tra 40 e 60 anni) hanno citato più piante (una media di 9,7 piante), mentre i più anziani (oltre i 60 anni di età) hanno citato una media di 8,6 piante ciascuno. Considerando che ogni intervista ha una durata non definita, e considerando che le prime due categorie d'età includono generalmente la popolazione più attiva lavorativamente, si può supporre che la conoscenza tradizionale abbia effettivamente una variazione dipendente dall'età. Le piante più citate sono *Foeniculum vulgare* Miller (102 citazioni), *Castanea sativa* Miller e *Laurus nobilis* L., mentre la maggior parte delle piante menzionate ha degli utilizzi medicinali. Questi ultimi sono stati

indicati soprattutto dalle donne, mentre gli usi domestico-artigianali sono citati più frequentemente dagli uomini. Alcune specie sono utilizzate esclusivamente per scopi medicinali (13 specie, tra cui *Chelidonium majus* L., *Plantago major* L. subsp. *major* e *Teucrium chamaedrys* L. s.l.), mentre le altre specie hanno più usi. Alcuni degli usi sono ampiamente conosciuti e diffusi in altre regioni italiane o condivisi con altri paesi del Mediterraneo, altri sembrano essere tipici dell'area. Pochi esempi degli usi condivisi sono riportati di seguito: *Foeniculum vulgare*, usato per preparare un decotto con proprietà digestive in Toscana (Camangi *et al.*, 2003), Sardegna (Maxia *et al.*, 2007), in Sicilia (Attaguile *et al.*, 1978; Napoli and Giglio, 2002), in Turchia (Basgel and Erdemoglu, 2006) in Algeria e a Cipro (González-Tejero *et al.*, 2008) e in Spagna (Rivera *et al.*, 2005); *Portulaca oleracea* L. subsp. *oleracea*, le cui foglie sono consumate in insalata come in Calabria (Passalacqua *et al.*, 2006), in Sicilia (Galt and Galt, 1978), in Lucania (Pieroni *et al.*, 2005b), in Albania (Pieroni *et al.*, 2005a) e a Cipro (Della *et al.*, 2006); *Myrtus communis* L. subsp. *communis*, i cui rami sono intrecciati per fare nasse insieme a *Olea europaea* L. e talvolta con *Pistacia lentiscus* L. [un uso simile è stato riportato per la Sardegna e la Corsica (Atzei, 2003)], ecc. D'altra parte, alcuni usi sembrano essere unici della Costiera amalfitana, come per esempio:

Satureja montana L. è utilizzata per scopi cosmetici, *Opuntia ficus-indica* (L.) Miller è strofinata sotto le barche prima delle regate per farle navigare più velocemente, la corteccia di *Quercus ilex* L. è usata per le scottature, anche se la pianta è usata genericamente per le ferite comunemente in Sud Italia (Guarrera, 2006a) ed in Marocco (Berahou *et al.*, 2007).

Le prime ricognizioni etnobotaniche sono state utili nel selezionare alcune specie locali da coltivare in un campo sperimentale (progetto promosso dall'Università di "Roma Tre" e dalla Comunità Montana Penisola Amalfitana). Infine, il modello biocomplesso ipotizzato comprende 6 fattori (incendi, frane, clima, vegetazione, condizioni del terreno, uso del suolo) e molti fattori legati alla coltivazione delle piante ("distanza dal mercato", trasporto, manodopera, finanziamenti pubblici, prodotto di successo) che interagiscono tra loro e possono dipendere da decisioni umane (volontà di coltivare la terra o no). Incrementare la conoscenza etnobotanica della Costiera amalfitana è un passo fondamentale per individuare soluzioni per la sua conservazione e può inoltre essere utile nell'integrare soluzioni per la protezione del suo paesaggio culturale.

SUMMARY OF THE RESEARCH PROJECT IN ENGLISH

Ethnobotany is the study of plant-human relationships embedded in dynamic ecosystems of natural and social components. Moreover, plant use and plant-human relationships are shaped by history, by physical and social environments and by inherent qualities of the plant themselves (Alcorn, 1995).

Some places turn out to be particularly suitable for ethnobotanical researches if they are, for example, characterized by a long historical tradition and a well preserved natural environment.

Amalfi Coast has always been characterized by a close relationship between the people and territory, and by a “cultural landscape” (typified by terraces) of international significance as a World Heritage Site (UNESCO, 1997). The scenic value of this landscape is only one component of the importance of this area: the biodiversity of the area is pretty high (Cancellieri *et al.*, 2007; Salerno *et al.*, 2007), its monuments and historical ruins, its tradition and folklore constitute a unique scenario. Despite these factors, in the Amalfi Coast ethnobotanical researches have been few and limited to ethno-pharmacological aspects (De Feo *et al.*, 1992; De Feo and Senatore, 1993).

The main goal of this project is to record and analyze the ethnobotanical knowledge in the Amalfi Coast in order to rescue this valuable information and evaluate its possible economic implications through a model which contemplates the interacting factors that could affect landscape as well as considering the changing of land use due to introduction of the cultivation of a traditional species.

The framework and the specific methodological steps of this project are:

1. A preliminary survey on ethnobotanical researches was necessary to design a sound method for gathering and analyzing data and to obtain information on ethnobotanical studies in Italy and other countries of the Mediterranean. Thus, a wide database on ethnobotanical works was created and made available on-line on the site of the *Ethnobotany Research and Application Journal* (E.R.A., 2009) as an open source (first step of the I year).
2. Field researches were planned in the study area in order to provide information on ethnobotanical uses therein. In Amalfi Coast 214 interviews were conducted during 11 missions (48 days) from April 2007 to September 2009. All the municipalities of the UNESCO site of Amalfi Coast were visited including the municipality of Agerola. No special selection criteria were used in the choice of the informants because one of the aims of this work was to assess the diffusion of ethnobotanical knowledge among population (Pieroni, 2000). After obtaining the Prior Informed Consent (Guarrera *et al.*, 2005; Pieroni *et al.*, 2005a), personal data on the informants and on uses of local plants were recorded through a semi-structured interview based on a preformed questionnaire. Interviews were conducted both by showing some fresh plants to the informants and without showing them. Information gathered in these two

ways was considered differently for some elaborations. The plants mentioned by informants were collected and voucher specimens were deposited at the Herbarium of the University of Roma Tre. Plant species have been identified following the “Flora d’Italia” (Pignatti, 2003) and nomenclature was updated (Tropicos.org, 2009; IPNI.org, 2009; Conti *et al.*, 2005; 2007). Traditional uses were classified into different categories [for example: Aromatic uses (AR), Human Nutrition (HN), Handicraft (H), Medicinal uses (MED), etc.] (I, II, III years).

3. Data were analyzed in order to:

- evaluate the Traditional Knowledge in the area and its distribution (within age, gender, geographical patterns). The loss and the extent of ethnobotanical knowledge in Amalfi Coast were evaluated through the analysis of its distribution considering the number and kind of quotation in relation of the age and gender of informants, the actuality and frequency of the plant uses (II, III years);

- compare the ethnobotanical data of Amalfi Coast with data coming from other studies, reported in Italian and International literature, in order to hypothesize cultural connections within the Mediterranean basin (II, III years);

- evaluate the economic impact of some traditionally used plants in a biocomplex model which integrates landscape elements and some marketing and economic issues (Cicia and Scarpa, 2004; Tempesta, 2005; Pratesi and Mattia, 2006). The structure of a model in which all the components of the cultural landscape of Amalfi Coast was hypothesized including both natural and human factors/units, which interact in time and space (Pickett *et al.*, 2005). This biocomplex model includes economic hypothesis of the impact of native plant cultivation and may be used for management planning (III year).

Many plants (179 species, both wild and cultivated) were reported to have an ethnobotanical use; however, traditional knowledge of plants is disappearing as younger generations (20-40 years) cited a mean of 6,8 plants, people of the intermediate category (40-60 years old) cited more plants (a mean of 9,7 plants), while elders (more than 60 years old) cited an average of 8,6 plants each). Considering that each interview has a random duration and that the first two categories include generally the most active population, it may be assumed that traditional knowledge is age-related. The highly cited plants are *Foeniculum vulgare* Miller (102 mentions), *Castanea sativa* Miller and *Laurus nobilis* L., while the largest part of mentioned plants have medicinal uses. These last ones are reported mainly by women, while plants used for handicrafts are cited most frequently by men. Some species are used exclusively for medicinal purposes (13 species as *Chelidonium majus* L., *Plantago major* L. subsp. *major* and *Teucrium chamaedrys* L. s.l.), while other species have more uses.

Some of these uses are widely known and widespread in other Italian regions or shared with other Mediterranean countries, others seems to be typical of the Amalfi Coast area. Few examples of the shared uses are: *Foeniculum vulgare*,

used to prepare a decoction with digestive properties in Tuscany (Camangi *et al.*, 2003), Sardinia (Maxia *et al.*, 2007), in Sicily (Attaguile *et al.*, 1978; Napoli and Giglio, 2002), in Turkey (Basgel and Erdemoglu, 2006), in Algeria and in Cyprus (González-Tejero *et al.*, 2008) and in Spain (Rivera *et al.*, 2005); *Portulaca oleracea* L. subsp. *oleracea*, which leaves are eaten in salad as well as in Calabria region (Passalacqua *et al.*, 2006), in Sicily (Galt and Galt, 1978), in Lucania (Pieroni *et al.*, 2005b), in Albania (Pieroni *et al.*, 2005a) and in Cyprus (Della *et al.*, 2006); *Myrtus communis* L. subsp. *communis*, which branches are weaved to make creels together with *Olea europaea* L. and sometimes with *Pistacia lentiscus* L. [a very similar use has been reported in Sardinia and in Corsica (Atzei, 2003)], etc. On the other hand, some uses seem to be unique of Amalfi Coast, as for example:

Satureja montana L. is used for cosmetic purposes, *Opuntia ficus-indica* (L.) Miller is rubbed under ships before a regatta in order to make them smooth in the sailing, the bark of *Quercus ilex* L. is used for burns, even if a similar use, for wounds, is typical of South Italy (Guarrera, 2006a) and in Morocco (Berahou *et al.*, 2007).

The first ethnobotanical surveys were useful to select some native species to cultivate in an experimental field (project promoted by University of “Roma Tre” and the “Comunità Montana Penisola Amalfitana”). Finally, the hypothesized biocomplex model includes 6 physical factors (fires, landslides, climate, vegetation, soil conditions, land use) and many other factors related to the cultivation of plants (distance to market, transport, manpower, public funding, successful product). All of these factors interact with each other and may depend on human decisions (willingness to cultivate the land or not). Improving the ethnobotanical knowledge of Amalfi Coast is the first but fundamental step to find out solutions for its preservation but may also be used to integrate solutions for cultural landscape protection.

ABBREVIATIONS

AF	Animal feeding
AG	Agriculture
AR	Aromatic uses
ATT.	Attachment
COSM	Cosmetic uses
DPGR	“Decreto del Presidente della Giunta Regionale” Decree of the President of the Regional Council
G	Games
H	Handicraft
HN	Human Nutrition
IGP	“Indicazione Geografica Protetta” Protected Geographical Indication
IPNI	International Plant Name Index
ISE	International Society of Ethnobiology
MED	Medicinal uses
O	Ornamental plants
PIF	“Progetti Integrati di Filiera” Distribution chain Integrated Projects
PIRAP	“Progetti Integrati Rurali per le Aree Protette” – Integrated rural projects for protected areas
PSR	“Piano di Sviluppo Rurale” Rural development plan
R	Little stories or rhymes on plants
REP	Repellent uses
RR	Ritual or religious uses
SAU	“Superficie Agricola Utilizzata” Surface-cultivated land
SIC	“Siti di Importanza Comunitaria” – Sites of Communitarian Importance
TK	Traditional Knowledge
VET	Veterinary uses
ZPS	“Zone di Protezione Speciale” – Special Protection Areas

NOTES

This thesis is written in American English language.

Italian words are inverted commas excluding names of places.

Italian dialect words are in italic and in inverted commas.

CHAPTER 1



1. INTRODUCTION

Ethnobotany is the study of plant-human relationships embedded in dynamic ecosystems of natural and social components. Moreover, plant use and plant-human relationships are shaped by history, by physical and social environments and by inherent qualities of the plant themselves (Alcorn, 1995). From this relationship arises the Traditional Knowledge of plant uses, or ethnobotanical knowledge. TK evolves, usually over many centuries, within a given locality, habitat or place and is transmitted from one generation to the next generation of people who live in, and by means of, the local environment (Hunn, 1998). The importance of this kind of knowledge, defined as Intangible Cultural Heritage (ICH), was recognized during the General Conference of UNESCO in 2003 as it is “a mainspring of cultural diversity and a guarantee of sustainable development” (UNESCO, 2003).

Amalfi Coast has a huge plant (Salerno *et al.*, 2007) and vegetation biodiversity (Cancellieri *et al.*, 2007). This area has been inhabited since the Roman period or even before (Cerasuoli, 1865), but it peaked its splendor during the Middle Ages period, when it was a maritime power in the Mediterranean Sea. The human activities through times have modified the natural landscape shaping a cultural landscape of particular value, which has been recognized worldwide since it has been included in the UNESCO World Heritage Site list (UNESCO, 1997).

In Amalfi Coast ethnobotanical researches are few and limited to ethnopharmacological aspects (De Feo *et al.*, 1992; De Feo and Senatore, 1993), while the above mentioned characteristic of the area could suggest a rich and variegated traditional ethnobotanical knowledge.

The main goal of this project is to record and analyze the ethnobotanical knowledge in the Amalfi Coast in order to rescue this valuable information and evaluate its possible economic implications. This analysis provides a model which contemplates the interacting factors that could affect the landscape considering changing of land use due to introduction of the cultivation of a traditional species. Specifically, the aims of this project are:

- Increase and preserve information on the ethnobotanical knowledge of Amalfi Coast.
- Evaluate the Traditional Knowledge (considering its originality, typology and actuality) in the area and its distribution (within age, gender, geographical patterns).
- Analyze the ethnobotanical gathered data of Amalfi Coast and compare them with data reported in Italian and International literature, in order to hypothesize cultural connections within the Mediterranean basin.

- Evaluate the economic impact of some traditionally used plants in a biocomplex model which integrates landscape elements and some marketing and economic issues (Cicia and Scarpa, 2004; Tempesta, 2005; Pratesi and Mattia, 2006).

Thus, the aim of this project is to contribute to the assessment of diffusion, entity and value of ethnobotanical knowledge in Amalfi Coast and specifically the use of wild and cultivated plants as food, medicine (for humans and animals), cosmetics and handy-crafts and for ornamental, ritual and game purposes. On the other hand, the biocomplex model where natural and human factors/units interact, including economic hypothesis of the impact of native plant cultivation, may be used for management plans.

1.1 DESCRIPTION OF THE RESEARCH AREA

This research was conducted in the Amalfi Coast UNESCO site with the inclusion of the municipality of Agerola, with a surface of about 134 Km², between 40.38°-40.40° longitude and 14.29°-14.44° latitude. Amalfi Coast covers the main part of the South East side of the part of the Sorrento Peninsula (Fig. 1.1). It is located in Southern Italy on the Tyrrhenian sector and it extends from the Naples Gulf to the Salerno Gulf.

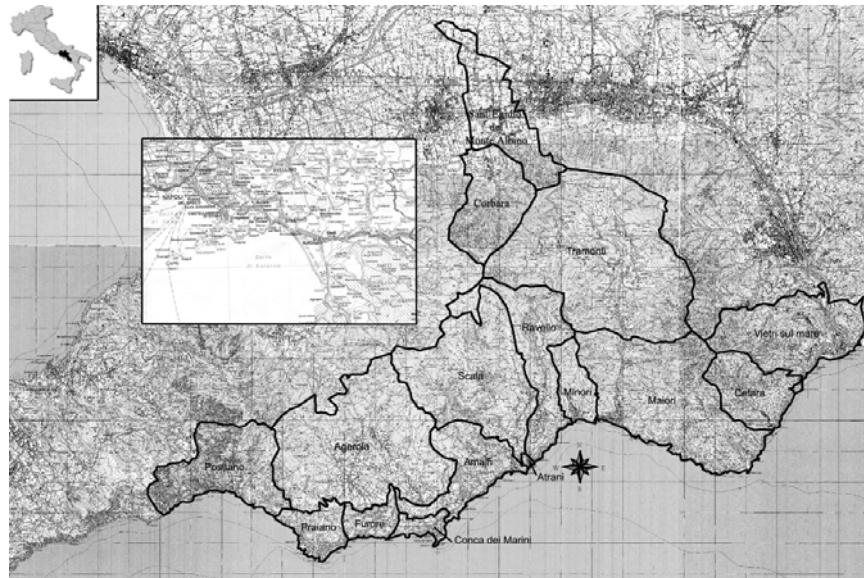


Fig. 1.1 Geographical position of Amalfi Coast and of the municipalities included in this research.

The orography of Amalfi Coast is featured by very high slopes and mountains which suddenly arise to 1400 m on the sea level (Fig. 1.2). Its landscape is characterized by inclined mountain sides, escarpments and cliffs that plunge down to the sea's edge. As a consequence, hydrographic network is shaped by straight and short streams with relatively high gradients of slopes. The Lattari chain is typified by an outcrop of a huge carbonatic stratification, essentially composed by limestone, dolomitic limestone and Meso-Cenozoic dolomites. Particularly important is the presence of pyroclastic deposits of coarse clasts, mainly pumices, which spread over many mountaintops, especially in the Northern and central sector of Amalfi Coast (Savo *et al.*, 2007).

Amalfi Coast has mainly a Mediterranean bioclimate while some sectors could be assigned to the Temperate belt (according to Rivas Martinez, 1993; 1996; Rivas Martinez & Loidi Arregui, 1999, Rivas Martinez *et al.*, 2002). Climatic factors, along with the geomorphologic ones, which change sharply in a relatively small area, provide a great diversity of plant communities which could be basically divided in three main belts. The basal level may be attributed to the Thermomediterranean belt and it is typified by a thermophilous wood. It is dominated by *Quercus ilex* L. and other plant communities belonging to the *Quercetea ilicis* (Mediterranean maquis and garigues). In the Mesomediterranean hilly belt chestnut woods and mixed woods (with *Acer opalus* Mill. subsp. *obtusatum* (Waldst. & Kit. ex Willd.) Gams, *Quercus pubescens* Willd. s.l., *Alnus cordata* (Loisel.) Loisel., *Ostrya carpinifolia* Scop.) are predominant while the upper areas have been defined as Thermotemperate and they are dominated by *Fagus sylvatica* L. and mixed woods (Cancellieri *et al.*, 2007; Savo *et al.*, 2007).

Rainfall, particularly, is very high almost everywhere in the Amalfi Coast (Tab. 1.1, see ATT. 1.1): it has been calculated an average yearly rainfall of 1300-1400 mm along the coast and close hills and higher average yearly rainfall values (up to 1800 mm) in some inland hills and mountains (Savo *et al.*, 2007).

A typical Walter and Lieth climate diagram of Amalfi Coast is reported in Fig. 1.2a which shows Mediterranean climate features but with a low drought stress *sensu* Mitrakos (Fig. 1.2b). However, it is important to highlight that the comparison of two series of climatic data of the Campania region (1951-1980 and 1981-1999) shows a reduction of the 15% of total rainfall and a reduction of the 30% of ground water infiltration (Ducci & Tranfaglia, 2008). A similar trend, at least for rainfall (Fig. 1.3), has also been pointed out for Amalfi Coast comparing data of two subsequent periods (1959-1978 and 1979-1999) with a reduction of the yearly rainfall of about the 20%, considering only the summer period (Savo *et al.*, 2007). This decrease may changes the plant community distribution and the flora of Amalfi Coast.

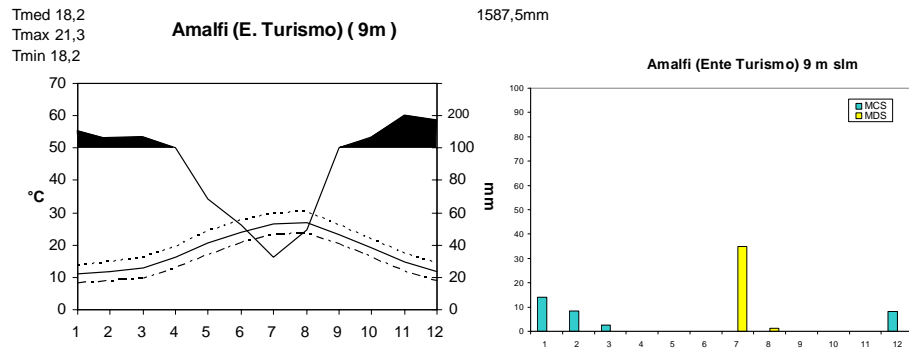


Fig. 1.2 a) Walter & Lieth Diagram of the Amalfi gauge station. b) The drought (in yellow) and cold (in blue) stress (in yellow) *sensu* Mitrakos (Mitrakos, 1980) of the Amalfi station.

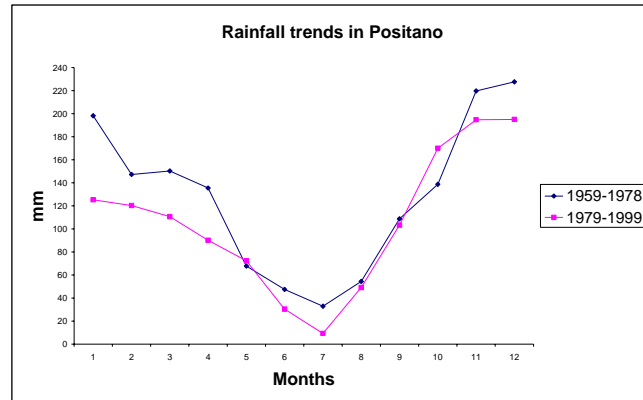


Fig. 1.3. Monthly rainfall amount in Positano considering the two series of data (Savo *et al.*, 2007).

1.1.1 NATURAL LANDSCAPE

Climatic factors, along with the geomorphology and pedology, which change sharply in a relatively small area, provide for the great plant biodiversity and the high variety of natural landscapes in Amalfi Coast.

Moreover, the high natural value of the area is not only due to its great biodiversity but also to the high number (more than 10%) of plant species which are rare, endemic or have a particular geographical distribution (Salerno *et al.*, 2007). All the study area with the exception of the municipality of Agerola is included in the Amalfi Coast UNESCO site, and a wide surface is also part of the Regional Natural Park “Monti Lattari” established in 2003 (DPGR of Campania, on November 13, 2003, n° 781).

A pretty large surface is also designated SIC (Council Directive 92/43/EEC) or/and a ZPS (Council Directive 79/409/CEE) (Tab. 1.2).

Code	SIC/ZPS
IT8050009 (IT8050054)	“Costiera Amalfitana tra Maiori e il Torrente Bonea”
IT8030008	“Dorsale dei Monti Lattari”
IT8050051	“Valloni della Costiera Amalfitana”
IT8050045	“Sorgenti del Vallone delle Ferriere di Amalfi”

Tab. 1.1. SIC and ZPS in Amalfi Coast.

All of these protection measures represent constraints for the conservation of natural and cultural landscapes, sites and biodiversity of Amalfi Coast. Aside from the plant biodiversity, many interesting Habitats (*sensu* Council Directive 92/43/EEC) were also reported for the area (Tab. 1.3, see ATT. 1.2).

Human impact may have increased the number of vegetation patches, creating a mosaic of woodlands, maquis, garigues and pastures, according to the dissimilar utilization of these plant communities.

The coastal area is typified by many interesting plant communities which have a distribution related to the distance to the sea and to altitude. Rocks and cliffs close to the sea frequently host alophilous plants as *Crithmum maritimum* L. and *Limonium remotispiculum* (Lacaita) Pign. These communities are mentioned in the List I of the Council Directive 92/43/EEC (Code 1240). On cliffs, close to these communities, it is possible to find out communities dominated by *Anthyllis barba-jovis* L. and, further from the sea, coenosis dominated by *Euphorbia dendroides* L. (Code 5330) or by *Juniperus phoenicea* L. s.l. (Code 5210). The main type of woodland of this belt is the oak wood of *Quercus ilex* (Code 9340). Sometimes, woodlands are dominated by *Quercus pubescens* Willd. s.l. cfr. *Q. virgiliana* which usually grows on abandoned terraces (Cancellieri, 2008).

The Mediterranean maquis is one of the most typical components of this belt and it is composed mainly by *Calicotome villosa* (Poir.) Link, *Erica arborea* L., *Pistacia lentiscus* L., *Myrtus communis* L., *Arbutus unedo* L., *Lonicera implexa* Aiton and *Smilax aspera* L.. Mediterranean garigues are otherwise dominated by *Thymelaea tartonraira* (L.) All., *Rosmarinus officinalis* L., *Cistus creticus* L. subsp. *eriocephalus* (Viv.) Greuter & Burdet and *Cistus salvifolius* L. Frequent fires may cause the domain of perennial prairies constituted mainly by *Andropogon hirtus* L. (Code 6220*) or by *Ampelodesmos mauritanicus* (Poiret) T. Durand et Schinz (Code 5330). Both these communities are important in the recolonization of abandoned terraces (Cancellieri *et al.*, 2007).

The hilly belt is typified by different types of vegetation which prevail according to changes in exposition, slope, altitude, etc. However, a pretty wide surface of hillsides is devoted to agriculture. The mixed woodland is very typical of this belt (*Acer opalus* Mill. subsp. *obtusatum* (Waldst. & Kit. ex Willd.) Gams,

Carpinus orientalis Miller, *Alnus cordata* (Loisel.) Loisel., *Quercus pubescens* Willd., *Ostrya carpinifolia* Scop., *Tilia platyphyllos* Scop., *Fraxinus ornus* L. and *Castanea sativa* Miller). Sometimes, *Alnus cordata* may become the main species and thus it creates a different community. It is worth to mention that *Alnus cordata* could affect positively the slope stability and for this quality is often used to increase the stability of chestnut plantations. These last ones strongly characterize the hilly landscape (Cancellieri *et al.*, 2006; Caneva *et al.*, 2007). *Castanea sativa* woodlands (Code 9260) often host many other species as (*Ilex aquifolium* L., *Alnus cordata*, *Acer opalus* subsp. *obtusatum*, *Viscum album* L., etc.). On steep hillsides, instead, *Ostrya carpinifolia* may become the dominant species. Shrub communities are common too (*Cytisus scoparius* (L.) Link, *Rubus canescens* DC., with an increasing presence of *Cytisus villosus* Pourret after fires). In the hillside and mountainside there are also communities which are typified by *Santolina neapolitana* Jordan et Fourr. and *Bromus erectus* Huds. (Cancellieri, 2008).

The deep valleys of Amalfi Coast are very characteristic and with rare types of vegetation due to the damp microclimate (Caputo & De Luca, 1968). Woods are mixed and similar to the ones outside the valley even if they usually grow at a lower altitude. On the rocky walls of the valleys, where water is percolating (petrifying springs), it is possible to find plant communities dominated by *Adiantum capillus-veneris* L. and eventually *Pinguicula crystallina* Sibth. & Sm. subsp. *hirtiflora* (Ten.) Strid. associated by mosses and liverworts (Code 7220) and in the inner part of valleys is possible to find communities with rare ferns (*Woodwardia radicans* (L.) Sm., *Pteris cretica* L. e *Pteris vittata* L.).

On higher mountains there are few, but interesting, beech woods dominated by *Fagus sylvatica* L. (Code 9210). Within these woods it is possible to find out also *Alnus cordata*, *Acer cappadocicum* Gled. subsp. *lobelii* (Ten.) P.C. De Jong, *Betula pendula* Roth. and *Ilex aquifolium* (Cutini *et al.*, 2005). Pastures have a high biodiversity (Code 6210) and they also host many orchids as *Orchis italica* Poir., *Orchis coriophora* L. etc. Last but not least, it is worth to mention a peculiar community typical of rocky slopes (Code 8210) which hosts *Potentilla caulescens* L., *Campanula fragilis* Cyr., *Globularia neapolitana* O. Schwarz, *Edraianthus graminifolius* (L.) A. D.C., *Lonicera stabiana* Guss. ex Pasq. and *Athamanta ramosissima* Port. (Cancellieri, 2008).

1.1.2 CULTURAL LANDSCAPE: TERRACES AND AGRICULTURE

Cultural landscapes represent the ‘combined works of nature and man’ and they include a diversity of manifestations of the interaction between humankind and its natural environment’. They are ‘illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or

opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal' (Fowler, 2003).

The cultural landscape of Amalfi Coast has a value recognized worldwide as it has been included in the UNESCO site list. This landscape has been shaped by a human activity lasted for millennia, which is typified by enchanting cities, monuments and a complex system of terraces built to cultivate the high slope mountain sides of the area. This system has changed the landscape; it affects the hydro-geological equilibrium, the slope stability and also the economy. In the last few decades many changes in land use have occurred in this area, due to a swift of economic interests towards the tourist sector leading to a considerable abandon of agriculture and consequently of terraces (Franco, 1990).

The diffusion of the terraces dates back to around the period from 950 to 1025 A.D. (Laureano, 2004). Terraces follow the curves of the mountains and are traditionally built in a way that guarantees an efficient drainage of meteoric waters. The farming system on terraces depends on altitude: lemon and citrus orchards are dominant up to 200 m, where they are accompanied and then replaced by vineyards which extend up to around 500 m, and sometimes up to 800 m above the sea level (Caneva *et al.*, 2007). The viticulture is one of the most important culture in the area with a surface of 416,16 ha (ISTAT, 2001). Vineyards are organized in pergolas essentially on terraces of hillsides in order to allow, eventually the cultivation of the underneath terrace. Pergolas are usually of chestnut wood and vines are fixed with flexible thin branches of *Salix alba* L. Many different varieties, some typical, of grapes are cultivated: "*uva tintore*", "*pediroso*" or "*ped'e palombo*", "*biancolella*", "*biancarzita*", "*ginestra*" and the "*pepella*" (Caneva *et al.*, 2007). The variety "*barbarella*" should be a kind of a wild grape which is used as rootstock. It is worth to mention also an ancient variety, called "*S. Nicola*" which seems to be exclusive of the area (Falcone, 1996). In the area there is a DOC wine the "*Costa d'Amalfi*" (D.M. 10.08.1995) which has not such a great production: in 2001 were only 247 farms with a cultivated surface of 66,25 ha with a production of 1658 hl of wine (Cacace *et al.*, 2005).

Anyway, citrus cultivation (citron, lemon and orange) is the most famous of the area which has started its diffusion during the XIII century (Amos and Gambardella, 1976). However, lemon and citron species were already known by Romans (Aliotta and Pollio, 1991) (these fruits are painted on walls or represented in mosaics in Pompei and Ercolano). Nowadays, the most important cultivar is the "*Femminiello amalfitano*" or "*Sfusato amalfitano*" along with the "*Limone di Sorrento*" which have the IGP label. Other cultivars are the "*Gloria di Amalfi*", the "*Ponzino amalfitano*", the "*Limone di Maiori*", the "*Limone lungo di Massa*" and the "*Limone Massese piccolo*" which have been recently introduced (Poiana *et al.*, 2006). The surface occupied by lemon orchard is

374.88 ha (ISTAT, 2001) resulting, consequently, the second cultivation for importance.

Despite the preponderance of vineyards and lemon orchards many other plants are, or were in the past, cultivated in Amalfi Coast. For example, in the past was pretty widespread the cultivation of *Cerastium siliqua* L. even though it was cultivated only in some coastal areas (Muto, 1988; Scala, 2003).

Furthermore it is noteworthy to mention the chestnut cultivation both for its fruits and for its wood (especially on hills and mountains). Other species which are cultivated in the area are apples, pears, cherries, figs and tomatoes, some of which are typical or traditional of the area (Regione Campania, 2009). The total surface that was devoted to agriculture in 2001 (ISTAT, 2001) is reported in Tab. 1.4 (see ATT. 1.3).

1.2 BRIEF HISTORY OF THE AREA AND ITS FOLKLORE

Despite the uncertainty of the origins of towns of Amalfi Coast, it is widely recognized that they should have a Roman origin or even previously by Etrurians (Cerasuoli, 1865). Since then, the orographic features of the area drove folks to consider the sea the main way for communications (Gargano, 1994). Amalfi, in fact was one of the four maritime republics and it peaked its splendor in the 1000 A.D. In that period Amalfi commerce activity was very prosperous all over the Mediterranean Sea and the friendly relationship with the Arabs permitted merchants to be active in ports of Sicily, Tunisia, Egypt and Palestine (Citarella, 1968). In that period and after, started the first changes in the landscape, due to a wide reduction of the woodland surface which was exploited to obtain wood for ship construction and for exportation. In that period all the economy of Amalfi Coast gravitated towards Amalfi. In the meantime (between the X and XI centuries) the “Scuola Medica Salernitana” peaked its international fame: the text of this school, in fact, had a wide distribution all over Europe, even after its decline (XIII century) (Apolito, 1989). During the XI Amalfi Coast started to lose its importance and became part of the Norman Kingdom of Sicily. During that period, it reduced its commerce activity which was more oriented towards minor ports of the South and there was an increase in cultivated land especially of terraces.

In Amalfi Coast there are still many celebrations, especially related to Religious Feasts. In particular it is worth to mention the “infiorata” of the *Corpus Domini* day (Fig. 1.4) which is also diffused in other Italian areas (Guarrera, 2006a) or the “luminaria di San Domenico”. A profane celebration is the carnival: in Praiano during that period were common rich banquets especially based on pork meat. Some celebrations are more recent but evocative of the past as for example the Feast of the historical courts in Sant’Egidio del Monte Albino or the regatta of the ancient maritime republics.

Other celebrations are disappeared, as for the example, until the past century the construction of a ship and its launching were occasion for celebrate (Amalfi, 1890): this highlights the cultural importance that the sea had, and partially still has, on the territory.



Fig. 1.4 A flower composition of the infiorata of the Corpus Domini in Amalfi.

1.3 THE BIOCOMPLEX MODEL

Integrating landscape with the human interactions, not only the human shaping the environment, the concept of biocomplexity may be introduced. Michener et al. (2001) defined “biocomplexity” as the properties emerging from the interplay of behavioral, biological, chemical, physical, and social interactions that affect, sustain, or are modified by organisms, including humans. Biocomplexity usually include a multiplicity of relationships and those interacting relationships span multiple scales (Pickett *et al.*, 2005).

A biocomplex model has been hypothesized for the terrace system of the Amalfi Coast, integrating both human (economic elements) and physical factors in order to facilitate the comprehension of this system for management planning.

It is relevant to include the various human relations with the landscape, especially when studying landscapes aiming at their management – because management is always based on human intervention. In fact, ecosystems are moving targets, with multiple potential futures that are uncertain and unpredictable. Therefore, management has to be flexible and adaptable (Walters, 1986).

But how much should be included and how this should be accomplished depends very much on the various perspectives related to concrete problems and on the scale of approach (Pedroli *et al.*, 2006).

A project promoted by the “Comunità Montana of Amalfi Coast” and University of Roma Tre is looking to introduce the cultivation of some native plants which could have an economic value. The aim of this project is to stimulate the cultivation of terraces, finding some plants that could be cultivated under grapes or lemon trees or at their place. The success of this project and a following acceptance among farmers is likely to have different impacts on environment, landscape and economy. The proposed model has been developed using this project as a kind of case study.

An agent-based modeling, where factors affecting human decision are also considered, was not included in order to keep the model at a level of complexity that can easily managed.

1.4 DESCRIPTION OF THE EXPERIMENTAL FIELD

The experimental field is located in Tramonti in the village of Polvica. It is developed on three terraces which have a South exposure and a total surface of 670.9 m². It is located at an altitude of about 310 m above sea level. in an area with high rainfall (average yearly rainfall of Tramonti Salzano 1633.7 mm and 1803.3 mm of Tramonti Chiunzi, Savo *et al.*, 2007). The field has a soil of colluvial and alluvial origin, while the pedological analysis showed that it is porous, well structured, sandy, with a high permeability and a medium water retention capacity, and fertile.

On the terrace which had a wider surface a seed nursery has been built in chestnut wood (Fig. 1.5); a vineyard is not so far from the nursery. Parcels are in total 83, separated by drains, partially in the sun and partially underneath the vineyard (in order to test the possibility of associate the two cultivations).

The species chosen for cultivation are 14: *Campanula fragilis* Cyr. subsp. *fragilis*, *Centaurea cineraria* L., *Convolvulus cneorum* L., *Globularia neapolitana* O. Schwarz, *Santolina neapolitana* Jordan et Fourr., *Foeniculum vulgare* Miller, *Spartium junceum* L., *Cistus creticus* L subsp. *eriocephalus* (Viv.) Greuter & Bourdet, *Teucrium fruticans* L., *Rosmarinus officinalis* L., *Mentha* sp. pl. (2 species), *Crocus imperati* Ten. and *Crocus sativus* L. Plants were mostly collected in Amalfi Coast in the wild, while bulbs of saffron were bought. Some plants are aromatic and intended for the food market, others are intended for the gardening market. It is worth to mention, that even if saffron is not native of the area, it was cultivated for its medicinal properties in monasteries since the Middle age, in the surroundings of Naples (Aliotta and Pollio, 1991).

Seeds were firstly planted in the nursery and then planted in the parcels (Fig. 1.6). Maintenance works consist in cleaning weeds, watering and harvesting of saffron pistils and of aromatic plants.



Fig. 1.5. The seed nursery.



Fig. 1.6. *Foeniculum vulgare* in the parcels.



3. RESULTS

The use of a plant depends on different factors: for example, plants which are abundant are more likely to be used (Johns *et al.*, 1990) and the distribution of plants depends mainly on climate and substrate which define their habitat. Uses are frequently affected by the history and culture of the local population, which are also affected by the degree of isolation from other cultures (Akerreta *et al.*, 2007a) but also by their past connections.

In the Mediterranean area some plants are widespread and are used in many countries. However, the different ways in which people use plants are complex and dynamic and the understanding of these processes is still rudimentary (Heinrich *et al.*, 2006). Furthermore, ethnobotanical researches continue to detect new or very rare plant uses, even in very well-known medicinal plants (Agelet and Valles, 2003). Thus, both ecological and cultural factors may affect the traditional use of a plant in a dynamic and unique process.

Traditionally used plants, according to the findings of this research, are totally 179 species belonging to 66 different families. According to De Natale *et al.* (2009) in the whole Campania region there are 474 ethnobotanical species with 1672 different uses, recorded between the end of XVIII century A.D. till the 2007 year. Thus, in the study area there may be preserved almost the 38% of the ethnobotanical flora of the whole region. However, it is not possible to argue how many species of the ethnobotanical flora of Amalfi Coast are included in that list. The ethnobotanical species noted during this research are listed in Tab. 3.1 (see ATT. 3.1). In the table it is also indicated their status (if cultivated or wild) along with the life form and the chorology (according to Pignatti, 2003) only of species which grow wild.

Many of the ethnobotanical families (38) are represented by only one species, while are predominant Asteraceae and Lamiaceae, Poaceae and Fabaceae (Fig. 3.1, see ATT. 3.2). The relatively common use of Lamiaceae and Asteraceae may be due to their widespread use as food or medicine as reported in other Mediterranean countries (Ali-Shtayeh *et al.*, 2008). The high number of Poaceae is however unusual and it may be due to the inclusion in the ethnobotanical list of plants used to feed animals as observed in other researches (Salerno and Guarrera, 2008). Most plants recorded in Tab. 3.1 are wild (104) or are cultivated but can grow wild (23), while 46 are only cultivated (4 entities are not considered because they are purchased as plant parts in markets or because it was only possible to identify the genus but not the species).

By analyzing the life form spectrum of the ethnobotanical wild flora it is possible to calculate that the Phanaerophytes are the 35%, Chamaephytes are the 11%, the Hemicryptophytes are the 32%, the Therophytes are the 16%, and the Cryptophytes (Geophytes) are the 7%. The ratio between Therophytes and Hemicryptophytes is around 0,5 while the same ratio in the complete flora of Amalfi Coast is around 1. From literature a ratio close to 1 is more typical of

North of Italy, while a ratio close to 2 is more typical of the South (Pirone and Ferretti, 1999). This difference may be due to the fact that Hemicryptophytes are more common in many plant communities (with the exception of strictly Mediterranean ones), or maybe because they are available for a longer period. In fact, a ratio close to 1 has been reported also for an ethnobotanical flora of a locality in Sicily (Napoli and Giglio, 2002).

In fact, as stated by Stepp and Moerman (2001): “Widely utilized medicinal plants need to be abundant and accessible. Rare plants are not often found in medicinal floras because they either quickly become extirpated or are brought under cultivation, and thus ceasing from being rare” (in Leonti *et al.*, 2008).

Many plants are indeed collected wild and then cultivated in gardens in order to guarantee their availability. Moreover, plants are gathered in different kind of habitats even if informants generically referred to “nearby” or to the “mountains”. Thus habitat preferences were inferred by Pignatti (2003) leading to the following distribution (the same species may be found in one or more habitat): uncultivated land (40 species), meadows (18 species), walls (19 species), but also in the Mediterranean maquis and garigue (20 species) and finally woods (23 species) (Mediterranean and Temperate). The predilection for uncultivated land and meadows may be affected by the fact that nearly 50% of gathered food plants in the Mediterranean are weedy and many live in crop field (Rivera *et al.*, 2006).

Considering the chorotype (Fig. 3.2) it is possible to highlight a prevalence of Mediterranean plants (51% including Steno- and Euro-, and Mediterranean-Mountain), while the Endemic and Subendemic plants are the 6% of the Ethnobotanical flora. A high number of plants are also Eurasiatic (24%) or have a Wide Distribution (W.D., 17%). Since many plants are Mediterranean it is likely that they may be part of the Ethnobotanical flora in other Mediterranean countries.

Chorological spectrum of the wild Ethnobotanical flora

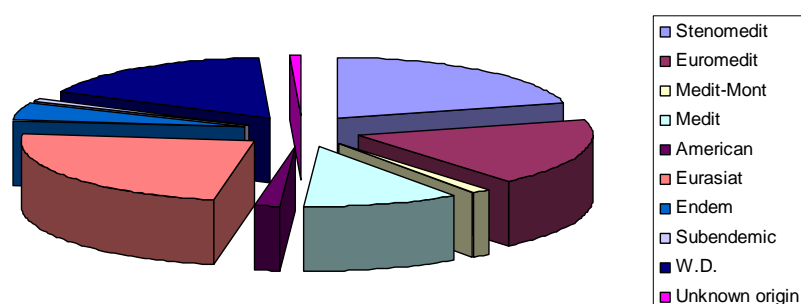


Fig. 3.2. Distribution of Chorological forms of the wild Ethnobotanical flora of Amalfi Coast.

3.1 ELABORATION OF DATA CONCERNING INFORMANTS

During the three years of this research project were performed 214 interviews even if the total number of persons interviewed is 222 (8 interviews were elicited as they were performed during another interview and was not possible to separate data or informants were relatives). Information on age range distribution and gender ratio of informants is resumed in Fig. 3.3.

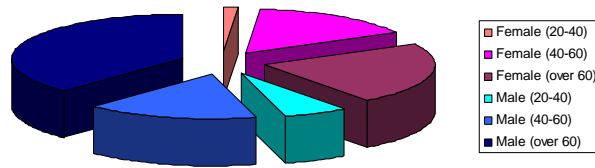


Fig. 3.3. Number of informant in each age and gender category.

The age of the informants ranged between 21 and 94 years with an average age of about 63 years. Considering that most of informants were pretty old, many of them were pensioner (30%), even if many of them reported that they still have some kind of occupation (for example, to take care of orchards or kitchen gardens). Among women, most of them were housewives (13% of the total, 34% of women). The Fig. 3.4 shows in detail the percentage of each job category.

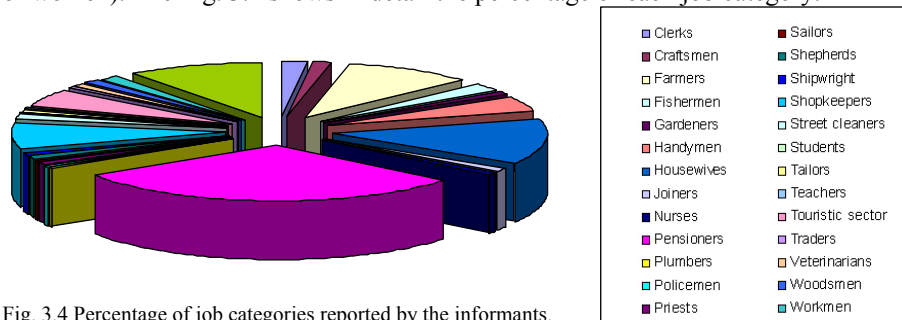


Fig. 3.4 Percentage of job categories reported by the informants.

The percentage of farmers (10%) is higher than the percentage of people working in the tourist sector (5%), considering also that many pensioner often cultivate a house garden or orchards. Furthermore, a certain percentage of informants (4%) had a jobs related to the sea (Shipwrights, sailors and fishermen).

During field surveys, all municipalities included in the research were visited and a different number of interviews were conducted in each of them. Many days were spent in each of the villages, and priority was given to the villages with a higher number of inhabitants. Moreover, the number of interviews in each village and their duration depended on availability of informants. Since duration of interviews had a random distribution it should not affect or be related to other factors (as for example, number of citation, age, etc.).

3.2 MEDICINAL PLANTS USED IN AMALFI COAST

According to the World Health Organization (WHO), a medicinal plant is defined as any plant which contains substances that can be used for therapeutic purposes or which are precursors of chemopharmaceutical semi synthesis (WHO, 1979, Khafagi and Dewedar, 2000). In Amalfi Coast folk medicine demonstrates typically a household character, and it is intended mainly as a mode of primary health care in order to heal minor illnesses: species cited are totally 101 with 294 different applications. Many plants are still used as medicinal, even though from the Tab. 3.2 (see ATT. 3.3) is possible to note that many uses are obsolete or are in reduction (when it is indicate A(O) it means that some of informants no more use the plant in that way). However, some uses are still deep rooted (as for example the use of a decoction with *Laurus nobilis*, *Foeniculum vulgare*, *Ceratonia siliqua*, *Ficus carica* for abdominal pain and or cold and cough). A similar decoction is mentioned in other Southern Italian regions [in Lucania (Pieroni and Quave, 2005; Pieroni, 2007), in Molise (Guarrera *et al.*, 2009)].

Some uses are shared with other Mediterranean countries, as for example the use of *Rubus ulmifolius* as vulnerary in Spain (Bonet *et al.*, 1999) and in Albania (Pieroni *et al.*, 2005a), the use of fennel as digestive in Turkey (Basgel and Erdemoglu, 2006), Algeria and in Cyprus (González-Tejero *et al.*, 2008) or the use of the sap of *Ficus carica* (Novaretti and Lemordant, 1990) and *Chelidonium majus* as wart removing in France (Bartoli *et al.*, 1997).

Some uses seems to be peculiar of the Amalfi Coast as for example the use of *Calystegia silvatica* leaves to heal pimples (resolvent), or the use of *Galium lucidum* for dislocations.

In Tab. 3.2 (see ATT. 3.3) are also reported the plant part used, the health problems for which they are or were used and the number of citation for each use. Moreover, the detailed explanation of the use and its correlation with similar uses in other parts of Italy and Mediterranean countries is reported below, along with the corresponding vernacular name (between brackets) of the species. Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use.

Achillea ligustica All. (“*erba tronela*”, “*erba troneca*”)

1. Floral tops were used to prepare a decoction in mixture with other species against cough. The plant is mentioned for the same use in Sardinia (Bruni *et al.*, 1997; Guarrera, 2006a).
2. Floral tops were used to prepare a decoction in mixture with other species with antihelminthic properties (herbs must be in odd number).
3. A decoction of floral tops is applied on painful knee joints.

Adiantum capillus-veneris L. (“*capelli e jenere*”)

1. A decoction with its fronds was used to purify women after childbirth (to facilitate the uterus cleaning). A similar use (to enhance uterine contractions during delivery) is mentioned in Lucania (Pieroni and Quave, 2005) and in Calabria (Barone, 1963; Guarrera, 2006a). This use is mentioned in the *Corpus Hippocraticum* (De Natale *et al.*, 2009).

2. Its fronds, mixed with other herbs, were used to prepare a decoction to provoke miscarriages. The plant is mentioned for the same use in Montecorvino Rovella (Campania) (De Natale and Pollio, 2007), in Sicily (Napoli and Giglio, 2002) and is commonly used in other Italian regions (Guarrera, 2006a).
3. A decoction with its fronds is drunk to increase the milk production.
4. Its fronds, mixed with many other plants, are used to prepare a decoction against cough and abdominal pain. It is used for the same purpose in other Italian regions (Guarrera, 2006a). A very similar preparation is used in Montecorvino Rovella, Campania (De Natale and Pollio, 2007). In mix with spices it is mentioned by Pseudo Apuleius for abdominal pain and by Petagna (1796) for respiratory system affection (De Natale *et al.*, 2009). This plant is mentioned for respiratory problems in Algeria and as digestive in Egypt (González-Tejero *et al.*, 2008).

Agave americana L. (“sambruino”, “agavì”)

1. The lymph is applied on burns.

Allium cepa L. (“cipolla”)

1. This plant is also used for colds and may be simply eaten or used to prepare a decoction for sore throat. The same use is mentioned in the Marche region (Pieroni *et al.*, 2004) and in many other Italian regions (Guarrera, 2006a). This plant is mentioned for respiratory problems in Cyprus (González-Tejero *et al.*, 2008)
2. A roasted onion is applied on burns. The same use is mentioned in Roccamonfina (Campania) (Antonone *et al.*, 1988; Guarrera, 2006a) Sardinia (Atzei *et al.*, 1991), in Abruzzi (De Simoni and Guarrera, 1994). A fresh onion is applied on burns in the Marche region (Pieroni *et al.*, 2004).
3. A fresh onion is rubbed on skin after insect bites. This remedy is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula. The same use is mentioned in the Marche region (Pieroni *et al.*, 2004). A similar use is reported for Spain (Akerreta *et al.*, 2007a) where its leaves are applied on infected wounds. It is used to heal skin abscess in Lucania (Pieroni and Quave, 2005) and for skin disease in Sardinia (Ballero *et al.*, 2001). In Albania (Pieroni *et al.*, 2005a) and Spain (Akerreta *et al.*, 2007a; 2007b) it is used as vulnerary. The plant has medicinal antibacterial properties which support this traditional application (Blumenthal *et al.*, 1998; Akerreta *et al.*, 2007a).

Allium sativum L. (“aglio”)

The medicinal properties of garlic have been well known since ancient times; reports of its use date back 3000 B.C. as asserted in an ancient Egyptian papyrus from 1500 B.C. (Ebers, 1875). Many modern studies have demonstrated the medicinal properties of garlic (Muio *et al.*, 2004).

1. The most diffused use of garlic was against worms: fresh garlic was given to kids to smell or to be eaten. A decoction of 4-5 cloves of garlic for 200-300 gr of water may be used otherwise. In Tuscany (Ansaldi and Tomei, 1997) fresh garlic is given to smell or a macerated to drink. A decoction of garlic for this purpose is used also in Sardinia (Atzei *et al.*, 1991; Ballero *et al.*, 2001). It is used as vermifuge in Tuscany (Camangi *et al.*, 2003) in Lucania (Pieroni and Quave, 2005), in Apulia (Maccioni *et al.*, 2001), in Sicily (Attaguile *et al.*, 1978), in Liguria (Maccioni *et al.*, 1999), in Abruzzi (De Simoni and Guarrera, 1994) and in Albania (Pieroni *et al.*, 2005a).
2. Bulb is eaten to lower pressure as well as in Lucania (Pieroni and Quave, 2005), in Liguria (Maccioni *et al.*, 1999), in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003), in Abruzzi (De Simoni and Guarrera, 1994), in Sicily (Attaguile *et al.*, 1978), in Sardinia (Atzei *et al.*, 1991) and Morocco (Jouad *et al.*, 2001).
3. Raw cloves are applied or rubbed on insect bites as well as in Tuscany (Camangi *et al.*, 2003), in Sardinia (Atzei *et al.*, 1991; Palmese *et al.*, 2001), in the Marche region (Pieroni *et al.*, 2004) and in Lucania (Pieroni and Quave, 2005). In Apulia (Maccioni *et al.*, 2001) it is used as anti-inflammatory. In Sardinia (Ballero *et al.*, 2001) and in the Palestinian Mountains, Israel (Ali-Shtayeh *et al.*, 2000) is also used for skin disease.

4. A cooked bulb is rubbed on skin infections. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005) and in Abruzzi (De Simoni and Guarrera, 1994) and in Spain (Akerreta *et al.*, 2007b).
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- Aloe vera* (L.) Burm. f. (“*aola*”)
1. The use of aloe is not common. A bitter extract was used to make babies stop sucking their mothers’ milk.
 2. This plant has been reported to be good for skin protection.
-
- Aloysia triphylla* Royle (“*erba cedra*”, “*erba cedrina*”)
1. A decoction with dried leaves is used as sedative and to reduce abdominal contractions (diarrhea, menstrual pain).
 2. Leaves were used to clean teeth.
-
- Amaranthus retroflexus* L. (“*marno*”)
1. Roots are added to a rich decoction which used as a drink against cough.
- This plant is very rich in vitamin C (Aliotta and Pollio, 1981). The medicinal use of *Amaranthus retroflexus* seems to have no related species used in folk medicine in Italy, but it is used to treat rheumatism in Montecovino Rovella, Campania (De Natale and Pollio, 2007).
-
- Artemisia arborescens* L. (“*erva bianca*”)
1. Two dried leaves are cold macerated in water for one night and then the water is drunk for a week as depurative and anti-inflammatory.
-
- Borago officinalis* L. (“*borragine*”, “*verraccia*”)
1. Dried flower of *Borago* are mixed with *Malva* flowers to prepare a depurative decoction. The plant is mentioned for the same purpose also in Montecovino Rovella, Campania (De Natale and Pollio, 2007), in Liguria (Maccioni *et al.*, 1999) and in Sicily (Napoli and Giglio, 2002; Lentini, 1987).
 2. Roots are mixed with other herbs to prepare a decoction for cough. An herbal tea made with the whole plant is used for the same purpose in Sardinia (Ballerio *et al.*, 2001), in the Marche region (flowers) (Taffetani, 2005) as well as leaves in Apulia (Maccioni *et al.*, 2001). This plant is mentioned for respiratory problems in Cyprus and Spain (González-Tejero *et al.*, 2008).
 3. Roots are mixed with other herbs to prepare a decoction for abdominal pain (gastrointestinal and liver problems).
 4. Leaves are claimed to be depurative and are eaten in omelets. The same use is reported in the Marche region (Taffetani, 2005).
-
- Brassica oleracea* L. s.l. (“*minestra*”)
1. Leaves are warmed up near fire and applied on hematomas with olive oil.
-
- Calamintha nepeta* (L.) Savi s.l. (“*nepeta*”)
1. Leaves were smelled for their balsamic properties against cough or were used to prepare a decoction along with other plants, against cold and cough. The plant is mentioned for the same purpose also in Sicily (Napoli and Giglio, 2002).
 2. Leaves are chewed for toothache or caries. The plant is mentioned for the same purpose also in Sicily (Arcidiacono *et al.*, 2007; Lentini, 1987).
 3. Leaves were smelled against worms or used to prepare a decoction with other herbs for helminthiasis. Floral tops are used for the same purpose also in Sicily (Napoli and Giglio, 2002).
 4. Leaves are used to prepare a decoction for abdominal pain. The juice of the squeezed leaves was added to some water as a drink for abdominal pain as well. The plant is mentioned for the same purpose also in Sicily (Attaguile *et al.*, 1978; Napoli and Giglio, 2002). This plant is mentioned for similar problems in Algeria (González-Tejero *et al.*, 2008).
 5. Leaves and of bay are warmed and then rubbed on joints to calm pain.
 6. Women during childbirth were used to clench a branch of *Calamintha* among teeth.
-
- Calystegia silvatica* (Kit. in Schrad) Griseb. (“*cancola*”)

1. Leaves are crushed and put on pimples as resolvent, also with olive oil and then lemon leaves to complete the process.
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- Campanula fragilis* Cyr. subsp *fragilis* (“*pianta e cerini*”)
1. It was used for medicinal purposes. The informant was not able to recall the specific use, but as the plant is endemic it is noteworthy to mention this information.
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- Carlina corymbosa* L. (“*cardogna*”)
1. Its root has to be cleaned and boiled. The water was drunk for intestinal inflammations.
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- Centranthus ruber* (L.) DC. subsp *ruber* (“*cannaviello*”, “*grassollo*”)
1. Floral tops were boiled in water to prepare a decoction with relaxant properties. In Sicily the root is used for the same purpose (Attaguile *et al.*, 1978; Lentini, 1989a).
 2. Floral tops were eaten against constipation.
-
- Ceratonía siliqua* L. (“*carrube*”, “*sciucelle*”)
1. The fruit is dried and cut in small pieces and then boiled with other plants to prepare a decoction against cold, cough, bronchitis. This decoction may be used also with kids. The plant is mentioned for the same purpose also in Sicily (Napoli and Giglio, 2002) and in Apulia (Maccioni *et al.*, 2001). Seeds are used for the same purpose in Sardinia (Ballero *et al.*, 2001)
 2. The fruit is dried and cut in small pieces and boiled with other plants to prepare a decoction against abdominal pain. This decoction may be used also with kids. The plant is mentioned for the same purpose also in Sicily (Napoli and Giglio, 2002). This plant is mentioned for the same problems in Cyprus (González-Tejero *et al.*, 2008).
 3. The fruit is eaten against diarrhea or is boiled with apple peels to prepare a decoction. The plant is mentioned for the same purpose also in Sicily (Attaguile *et al.*, 1978; Napoli and Giglio, 2002).
 4. The unripe fruit is cut and rubbed on warts.
 5. Fruits are macerated in alcohol to prepare digestive spirits.
-
- Ceterach officinarum* Willd. subsp *officinarum* (“*spaccapetre*”, “*pandosco*”)
1. Fronds are mixed with other plants to prepare a decoction which is used as syrup to heal cough. It is not an essential ingredient. A very similar preparation is used in Montecovino Rovella, Campania (De Natale and Pollio, 2007). This plant is used for the same purpose also in Sicily (Attaguile *et al.*, 1978). It is used as expectorant in Liguria (Maccioni *et al.*, 1999). This plant is mentioned for respiratory problems in Spain (González-Tejero *et al.*, 2008).
- According to the etymology of the vernacular name, this plant may have been used for kidney stones, as in Sicily it has been observed the correlation of this name for many plants used for the same purpose (Lentini, 2009).
-
- Chelidonium majus* L.
1. Sap is rubbed on warts as anti-wart. The same use is mentioned in Liguria (Maccioni *et al.*, 1999), in the Marche region (Pieroni *et al.*, 2004), in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003) in Spain (Akerreta *et al.*, 2007b) and in France (Bartoli *et al.*, 1997).
 2. The plant is claimed to be good for liver problems. The plant is retained curative for different liver pathologies also in Apulia (Amico, 1974), in Spain (Agelet and Valles, 2003) and in Albania (Pieroni *et al.*, 2005a). This use may be related somehow to the signature doctrine (Camarda, 2008) the yellow color of the sap may recall the yellowing of skin due to liver problems.
-
- Citrus limon* (L.) Burm. (“*limone*”)
1. The lemon juice is rubbed on wounds. Some indicate that the juice must be boiled or added to *Parietaria* leaves and salt (especially for feet wounds). The same use is reported in Veneto (Corrain, 1977).
 2. Peel of the fruit, mixed with other herbs and plants, are used to prepare a decoction for cold and cough. This plant is used for the same purpose also in Sicily (Attaguile *et al.*,

- 1978). The fruit is used for the same purpose in Liguria (Maccioni *et al.*, 1999). The juice is used for cold in Sardinia (Ballero *et al.*, 2001).
3. Peels of the fruit are added to a rich decoction prepared with many plants for abdominal pain in general, and some of these preparations are claimed to be depurative as well. In Sardinia (Palmese *et al.*, 2001) a decoction with only lemon and bay is used for gastric pain.
 4. Lemon peels are used to prepare digestive spirits. The same use is reported also in Ischia (Campania) (Vallariello, 2003). The same use and a very similar preparation are reported in Tuscany (Ansaldi and Tomei, 1997).
 5. Lemon peels are boiled in hot water to prepare a digestive beverage, the “*canarino*”. The fruit is used for the same purpose in Liguria (Maccioni *et al.*, 1999) and in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003).
 6. Lemon juice is claimed to be depurative, digestive and refreshing.
 7. A slice of lemon is tied up to the forehead to calm headache.
 8. To calm headache is reported the use of drinking coffee with lemon juice.
 9. Leaves are applied on furuncles or abscesses as resolvent, olive oil may be added. The same use is mentioned in the Marche region (Pieroni *et al.*, 2004).
 10. Peels are boiled and the water is drunk against stomach pain. The same use is mentioned in the Middle-East (Negev, Jordan and Sinai desert) (Abu-Rabia, 2005).
 11. Peels, boiled in water, were considered depurative for the liver.
 12. The lemon peel is chewed for toothache.
 13. Lemon juice is claimed to be useful against cholesterol. This plant is mentioned for cardio-vascular problems in Algeria (González-Tejero *et al.*, 2008).
 14. The hot juice of lemon is drunk against diarrhea. This remedy is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula. Lemon juice is used against diarrhea in Tuscany (Ansaldi and Tomei, 1997) and as intestinal astringent in Sardinia (Ballero *et al.*, 2001). The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005) and in the Middle-East (Negev, Jordan and Sinai desert) (Abu-Rabia, 2005).
 15. The juice of tomato or of lemon is used as hand disinfectant
 16. One informant reported that the mould that grows on lemon may be used for wounds as well.
 17. People use to gargle with lemon juice against swollen tonsils. A similar use is reported for Sardinia (Palmese *et al.*, 2001) while in the Marche region (Pieroni *et al.*, 2004) and in Spain (Akerreta *et al.*, 2007b) lemon juice is gargled for sore throat.
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- Citrus nobilis* Lour. (“*mandarino*”)
1. Peels are used to prepare digestive spirits. They may be mixed to other citrus fruit peels to prepare a digestive beverage called “*quattro stagioni*”.
 2. Peels of tangerine are used to prepare a decoction, which is prepared with many other plants, against cough.
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- Citrus sinensis* (L.) Osbeck (“*arancia*”, “*portugallo*”)
1. Peels are boiled with other plants to prepare a decoction against abdominal pain. A similar use is reported in Piemonte (Sella, 1992; Guarrera, 2006a) and in Sicily (Lentini and Aleo, 1991; Guarrera, 2006a).
 2. Peels are boiled with other plants to prepare a decoction against cold and cough. This plant is used for the same purpose in Tuscany (Tomei *et al.*, 1999; Guarrera, 2006a), in Latium (Guarrera, 1994), in Lucania (Pieroni, 2007) and in Sicily (Amico and Sorce, 1997; Guarrera, 2006a).
 3. Its flowers mixed with flowers of *Tilia platyphyllos* and *Opuntia ficus-indica* are boiled to prepare a sedative and refreshing decoction.
 4. Peels of the fruits are mixed to other citrus fruit peels (tangerines and lemons) to prepare a digestive beverage called “*quattro stagioni*”.
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- Coffea arabica* L. (“*caffè*”)

1. Not roasted coffee beans were used to prepare an abortive decoction.
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- Crithmum maritimum* L. (“*erba marina*”, “*anice selvatico*”)
1. The plant was used to prepare a decoction against whooping cough. This use may be explained by the presence within the essential oil of important active components, among which it is worth to mention phellandrene useful for chronic bronchial diseases due to its expectorant and antimicrobial properties (Cornara *et al.*, 2007).
 2. This plant was boiled and then the water was drunk to calm pains.
The medicinal properties were firstly described by Dioscorides in *De Materia Medica* and was also known by the “Scuola Medica Salernitana” (Cornara *et al.*, 2007).
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- Cynodon dactylon* (L.) Pers. (“*ramegna*”, “*gramegna*”)
1. Roots were used to prepare a decoction with depurative and refreshing properties. The plant is mentioned for the same purpose also in Sicily (Lentini, 1987; Napoli and Giglio, 2002) in Apulia (Maccioni *et al.*, 2001), in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003), and in Liguria (Maccioni *et al.*, 1999) and in France (Corsica) (Parc Naturel Regional de la Corse, 1985).
 2. The dried chopped plant (which should be dried in a dark place to retain its qualities) is used to prepare a decoction which is useful to dissolve kidney stones. In Sardinia (Atzei *et al.*, 1991) it is used for the same purpose. In Sicily the plant is used to dissolve kidney stones (Lentini, 1987), for kidney problems (Galt and Galt, 1978; Lentini, 2000) and to prepare a diuretic decoction (Attaguile *et al.*, 1978; Lentini, 1989a) or a diuretic decoction with anti-inflammatory properties for kidneys (Napoli and Giglio, 2002). This plant is used to prepare a decoction for kidney problems in the Cilento National Park (Campania) (Salerno and Guarrera, 2008) and in Cyprus (González-Tejero *et al.*, 2008).
 3. Its root is used to prepare a decoction which is claimed to be curative for liver problems.
 4. Its roots and other species are used to prepare a decoction used to heal cough. In Montecovino Rovella, Campania (De Natale and Pollio, 2007) its aerial part are used to heal cough as well as in Abruzzi (De Simoni and Guarrera, 1994) the plant is used to heal asthma.
 5. The plant is used to prepare a decoction for headache.
 6. Its root and other species were used to prepare a decoction for abdominal problems. A similar use is reported in Tuscany (Camangi *et al.*, 2003). Aerial parts are used for the same purpose in the Cilento National Park (Salerno and Guarrera, 2008).
 7. This plant is claimed to be useful against lack of appetite.
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- Diploaxis tenuifolia* (L.) DC. (“*rucola*”)
1. This plant is claimed to have aphrodisiac properties. This plant is used as revulsive in Sicily (Attaguile *et al.*, 1978) and thus may stimulate blood afflux to more superficial tissues.
 2. This plant was used against abdominal pain.
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- Equisetum* sp. (“*coda cavallina*”)
1. This plant is used to prepare a decoction that is used to massage on skin to prevent skin aging and favorite drainage of liquids.
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- Eucalyptus globulus* Labill. (“*o’calipso*”)
1. Its bark was used to prepare a decoction against cough. A decoction of leaves of different kind of *Eucalyptus* are used to prepare a decoction for cough and sore throat in Sardinia (Ballero *et al.*, 2001; Palmese *et al.*, 2001). Its leaves are used in Spain for cold (Akerreta *et al.*, 2007b). *Eucalyptus globulus* Labill. is claimed to be balsamic and expectorant in Sicily (Attaguile *et al.*, 1978) and it is mentioned for respiratory problems in Algeria (González-Tejero *et al.*, 2008).
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- Euphorbia dendroides* L. (“*tutumagliu*”)
1. The sap of *Euphorbia* is used as anti-wart. A decoction of sap is used for skin diseases in Tunisia (Boukef *et al.*, 1982; Faqi *et al.*, 1995). The same use for *Euphorbia* sp. pl. is mentioned for the Cilento National Park (Salerno and Guarrera, 2008) and in the Marche region (Pieroni *et al.*, 2004).
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Ficus carica L. (“fica”, “ficozze”)

1. Dried fruits are boiled with other plants to prepare a decoction against cold, cough, bronchitis. This decoction may be used also with kids. A very similar preparation is used in Montecovino Rovella, Campania (De Natale and Pollio, 2007) and in the same region it is used for the same purpose in the Cilento National Park (Salerno and Guarrera, 2008), in Apulia (Maccioni *et al.*, 2001) in Liguria (Maccioni *et al.*, 1999), in Abruzzi (De Simoni and Guarrera, 1994), in Lucania (Pieroni and Quave, 2005) and in Sicily (Lentini, 2000). This is mentioned for respiratory problems in Cyprus (González-Tejero *et al.*, 2008).
2. Dried fruits are boiled with other plants to prepare a decoction against abdominal pain. This decoction may be used also with kids. Three, four dried figs are boiled for a long time in half of a litre of red wine and used as syrup for cough (3-4 times a day). Peel of lemon and apple may be added as well.
3. Sap is used as anti-warts. The same use is reported in Lucania (Pieroni and Quave, 2005) in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003), in the Marche region (Pieroni *et al.*, 2004), in Spain (Akerreta *et al.*, 2007b) and in France (Novaretti & Lemordant, 1990). In Sardinia leaves are applied as corn-blaster (Atzei *et al.*, 1991; Ballero *et al.*, 2001) or anti-wart (Atzei *et al.*, 1991). In Liguria (Maccioni *et al.*, 1999) is mentioned as *caustic*. This use was also mentioned by Pliny in the *Naturalis Historia* (Bartoli *et al.*, 1997).
4. Sap is rubbed on insect bites. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008), in Lucania (Pieroni and Quave, 2005) and in Sicily (Lentini, 1987; 2000).
5. Dried fruits are used to prepare a decoction with also bay leaves and fennel seeds with digestive properties.

Foeniculum vulgare Miller (“finocchietto”, “finocchio selvatico”, “finucchiu”)

1. Each plant part, depending on the informant, fresh or dried, is used to prepare a decoction for abdominal pain with many other species (it is safe for kids). The same use is reported in Tuscany (Ansaldi and Tomei, 1997). Fennel fruits are used in Jordan for abdominal pain (Abu-Irmaileh and Afifi, 2003). In the Palestinian Mountains, Israel (Ali- Shtayeh *et al.*, 2000) it is used to heal problems to the digestive system.
2. Fruits and floral tops are used to prepare a decoction for cold and cough, mixed with many other species (it is safe for kids). Fennel fruits are used in Jordan for common cold (Abu-Irmaileh and Afifi, 2003). This plant is mentioned for respiratory problems in Cyprus (González-Tejero *et al.*, 2008).
3. Fruit of fennel are used to prepare a simple decoction (the plant is used alone or by adding only bay or chamomile) and it is drunk as digestive. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008), in Tuscany (Camangi *et al.*, 2003), in the Marche region (Taffetani, 2005), in Sardinia (Maxia *et al.*, 2007), in Sicily (Attaguile *et al.*, 1978; Napoli and Giglio, 2002) and in Turkey (Basgel and Erdemoglu, 2006). This plant is used as digestive in Algeria and in Cyprus (González-Tejero *et al.*, 2008).
4. Its fruits and floral tops (with dried fruits), but also the whole plant may be used, are macerated in alcohol to prepare an alcoholic beverage which has digestive properties and may stimulate appetite before meals. Fruits are added to grappa along with gentian roots, to prepare digestive spirits in Abruzzi (De Simoni and Guarrera, 1994).
5. Roots are boiled in water which is then drunk as refreshing.
6. The fresh plant is crushed and the juice is left in water for 2-3 hours. This beverage is claimed to be refreshing.
7. Fruits of fennel with other species were boiled and then the vapors (“fumiento”) should be inspired to relieve cough. The same use, but for leaves, is reported in Sardinia (Atzei *et al.*, 1991).
8. A decoction made with floral top of fennel, *Achillea ligustica* and *Calamintha nepeta* was used for helminthiasis.

Fragaria vesca L. subsp *vesca* (“fragoline di bosco”)

1. Strawberry roots with slices of dried pears and cherry peduncles are used to prepare a decoction for cough. Leaves are used to prepare a decoction for sore throat in the Marche region (Pieroni *et al.*, 2004).

Fraxinus ornus L. subsp *ornus* (“frassino”, “frasso”)

1. Its bark is cold macerated in water for a day and then water is drunk as depurative, refreshing, and purifying and should be also good for abdominal pain.
2. This same preparation is claimed to be good for lower blood pressure.
3. The same preparation is used to gargle as throat disinfectant.

Fraxinus ornus is rich in is rich in hydroxycoumarins: esculin, esculetin, fraxin, and fraxetin are the main components of the bark. Biological studies reveal significant antimicrobial, antioxidative, photodynamic damage prevention, wound healing, anti-inflammatory, immunomodulatory and antiviral activities, explaining use of the bark in folk human and veterinary medicine (Kostova, 2001; Viegi *et al.*, 2003).

Galium lucidum All. s.l.

1. Many plants were cut and rubbed on dislocation with vinegar.
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Hordeum vulgare L. (“orzo”)

1. A decoction made with fresh seed of barley mixed with many other species is used to heal cough. A very similar preparation is used in Montecovino Rovella, Campania (De Natale and Pollio, 2007). The plant is reported for the same use in Lucania (Pieroni and Quave, 2005). In Tuscany (Camangi *et al.*, 2003) a decoction of barley is retained generally curative as anti-inflammatory.
-

Hypericum perforatum L. (“iperico”)

1. This plant is collected the S. John’s day and is dried. Then, it could be used to prepare a decoction, mixed with other plants, to heal cough. This plant is claimed to be decongestant in Sicily (Attaguile *et al.*, 1978). This plant, macerated in oil, is used in Spain for sore throat (Akerreta *et al.*, 2007b).
 2. Crushed plant parts are used as anti-wart.
 3. The plant is used for pimples. This plant is claimed to be antiseptic in Sicily (Attaguile *et al.*, 1978). This plant, macerated in oil, is used in Spain for skin troubles (Akerreta *et al.*, 2007b).
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Juglans regia L. (“noce”)

1. Twenty-four walnut husks are collected the St. John’s day eve and are macerated in alcohol to prepare a digestive alcoholic beverage called “nocino” or “nocillo”, an informant reported the addition of vanilla, fauget and nutmeg. The use of walnuts only for the same purpose is reported also in Ischia (Campania) (Vallariello, 2003), in Tuscany (Camangi *et al.*, 2003) and in Sicily (Attaguile *et al.*, 1978). Walnut husks along with *Pimpinella anisum* seeds and leaves of *Mentha x piperita* are macerated in alcohol to prepare digestive spirits in Piemonte (Longhi and Scanavino, 1986)
 2. The wooden parts among kernels of walnut are mixed with other plants to prepare a decoction for cough.
-

Lactuca sativa L. (“lattuga”, “insalata”)

1. Leaves (fresh or dried) are used to prepare a decoction which is applied on dental abscesses. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005).
 2. Cooked leaves, when they cooled, were rubbed on dental abscesses or purulent infections. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005).
 3. Leaves are used to prepare a decoction with laxative properties.
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Lactuca serriola L. (“cicoria”, “cicoria selvatica”, “cicoria campestre”)

1. Leaves are used to prepare a decoction for digestive problems.
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Laurus nobilis L. (“alloro”, “lauro”, “o’lauro”)

1. Leaves (fresh or dried), preferably without the central nerve, are used alone or mixed with other plants to prepare a decoction for abdominal pain. Some of these preparations are considered safe for kids. Some of this preparation are claimed to help recover from weakness. In Abruzzi (De Simoni and Guarrera, 1994) the plant is used to heal abdominal

pain as well. Fruits are used to prepare a decoction for stomach problems in Apulia (Maccioni *et al.*, 2001). A similar use is reported in Jordan where bay leaves are used for general weakness (Abu- Irmaileh and Afifi, 2003).

2. Leaves of bay are mixed to other species to prepare a decoction for cold and cough. This remedy is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008) and in Abruzzi (De Simoni and Guarrera, 1994). An herbal tea made with its leaves alone is used in Sardinia (Ballero *et al.*, 2001) for the same purpose.
3. A decoction with leaves of bay and few other species or only this species, is drunk as digestive, and it is mixed with milk and given to babies. The plant is mentioned for the same purpose in Sicily (Lentini, 1987; Arcidiacono *et al.*, 2007), in Tuscany (Camangi *et al.*, 2003), in the Marche region (Taffetani, 2005), in Lucania (Pieroni and Quave, 2005), in Sardinia (Atzei *et al.*, 1991; Ballero *et al.*, 2001), in France (Corsica) (Parc Naturel Regional de la Corse, 1985) and it is mentioned for digestive problems in Algeria, Cyprus and Spain (Gonz'alez-Tejero *et al.*, 2008).
4. Leaves are macerated in alcohol to prepare digestive spirits or are added to a digestive traditional liqueur called "*concerto*" which is made with many spices.
5. A decoction of bay leaves was mixed with mash potatoes for gastritis.
6. Bay leaves, mixed with other herbs, are used to prepare a decoction for stomach problems and diuretic properties. An herbal tea made with leaves is used as antiemetic in Sardinia (Ballero *et al.*, 2001). In the Palestinian Mountains, Israel (Ali- Shtayeh *et al.*, 2000) it is used to heal problems to the urinary system.
7. Leaves of this plant and of *Calamintha* are warmed and then rubbed on joints to calm pain. Leaves of bay are used in Jordan for arthritis (Abu- Irmaileh and Afifi, 2003). In the Palestinian Mountains, Israel (Ali- Shtayeh *et al.*, 2000) it is used for rheumatisms. This plant is used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).

Lavatera sp. ("*malvone*")

1. Its leaves were used as suppurative for pimples.
2. This plant was retained useful for cough.

Lepidium graminifolium L. subsp *graminifolium* ("*fiori di San Giuseppe*")

1. Stems of this plant, mixed with other species, are used to prepare a decoction for cough.

Linum usitatissimum L. ("*lino*", "*semenza e'lino*")

1. A poultice of linseeds is applied on wounds.
2. A poultice of linseeds is put on the chest to heal cough. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008), in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003), in Sardinia (Ballero *et al.*, 2001) and in Sicily (Napoli and Giglio, 2002).

[In Egyptian medical papyruses is mentioned the use of this plant as seed, fibers and leaves, while the oil was cited in subsequently Roman documents. Nowadays, in Egypt only the seeds are sold and used as laxative and anti-inflammatory of digestive and urinary systems (Tomei and Maccioni, 1995)].

Lobularia maritima (L.) Desv. subsp *maritima* ("*fiori di San Giuseppe*", "*cirilli di San Giuseppe*")

1. Flowers are used to prepare a decoction, with other species, against cold and cough.
2. A decoction with this plant and other species was used for abdominal pain and cough.

Malus pumila Mill. ("*mela*")

1. Slices or peels of the fruit are used to prepare a decoction with other plants against cough. A very similar preparation is used in Montecovino Rovella, Campania (De Natale and Pollio, 2007). The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005; Pieroni, 2007), in Liguria (Maccioni *et al.*, 1999) and in Sardinia (Ballero *et al.*, 2001). A similar use is reported in Tuscany (Camangi *et al.*, 2003).
2. Slices or peels of the fruit are used to prepare a decoction with other plants for stomach or abdominal pain.

3. Slices of the fruit are used to prepare a decoction with other plants for kidney problems.
4. Pieces of the fruits were cooked in wine for a long time with figs and peel of lemon against cough. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005).
5. Slices of apples and fruits of *Cerantonía siliqua* are used to prepare a decoction for diarrhea.

Malva sp. pl. (*Malva cretica* Cav. s.l. *Malva neglecta* Wallr. *Malva sylvestris* L. subsp. *sylvestris* ("mavro", "marmolo"))

1. Roots of these plants are added to a decoction with other plants for cough, cold, asthma, bronchitis, throat ache. *Malva* sp. pl. are mentioned for the same purpose in Abruzzi (De Simoni and Guarrera, 1994). *Malva sylvestris* is mentioned for the same purpose in Campania in Montecovino Rovella (De Natale and Pollio, 2007) and in Cilento National Park (Salerno and Guarrera, 2008), in Lucania (Pieroni and Quave, 2005), in the Marche region (Pieroni *et al.*, 2004; Taffetani, 2005), in Apulia (Maccioni *et al.*, 2001), in Sicily (Attaguile *et al.*, 1978), in Sardinia (Ballero *et al.*, 2001) and in Spain (Akerreta *et al.*, 2007b).
2. Roots of these plants are used to prepare a refreshing decoction. In Sardinia (Atzei *et al.*, 1991) a decoction of flowers of *Malva sylvestris* is retained depurative as well.
3. Roots of these plants are crushed (leaves may be added as well) and added to a decoction with other plants for abdominal pain. *Malva* sp. pl. are mentioned for the same purpose in Abruzzi (De Simoni and Guarrera, 1994) and in Tuscany (Camangi *et al.*, 2003). *Malva sylvestris* is used for abdominal pain also in Sardinia (Ballero *et al.*, 2001). *Malva sylvestris* is used to heal menstrual pain in Lucania (Pieroni and Quave, 2005; Pieroni, 2007). Aerial parts of *Malva sylvestris* and *Malva neglecta* (the root is used to prepare a digestive decoction) are used as gastrointestinal anti-inflammatory in Spain (Agelet and Valles, 2003). *Malva sylvestris* is mentioned for digestive problems in Cyprus (González-Tejero *et al.*, 2008).
4. Roots of these plants, alone or mixed with other species, are used to prepare a diuretic decoction which may be used for cystitis as well. The same use is reported in Tuscany (Camangi *et al.*, 2003) and in the Marche region (Taffetani, 2005). Leaves of *Malva sylvestris* are used in the Middle-East (Negev, Jordan and Sinai desert) for the same purpose (Abu-Rabia, 2005).
5. Leaves of these plants are mixed to flowers of *Borago officinalis* to prepare a depurative decoction. *Malva sylvestris* is mentioned for the same use in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003) and in Lucania (Pieroni and Quave, 2005).
6. These plants are used to prepare a decoction for headache.
7. These plants are used to prepare a decoction which is then applied with a tissue on dislocations.
8. Roots are added to a sedative decoction with other plants.
9. Roots are added to a decoction with other plants for kidney problems.

Matricaria chamomilla L. ("camomilla")

1. Floral tops of chamomile are mixed to other species to prepare a decoction for abdominal pain.
2. Floral tops of chamomile are mixed to other species to prepare a decoction for cold and cough. This remedy is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula. The plant is mentioned for the same use in Cilento National Park (Salerno and Guarrera, 2008), in Lucania (Pieroni and Quave, 2005; Pieroni, 2007) and in Turkey (Basgel and Erdemoglu, 2006). The herbal tea made with flowering top is used for the same purpose in the Marche region (Pieroni *et al.*, 2004) and in Tuscany (Camangi *et al.*, 2003).
3. An herbal tea made with floral tops is used as sedative. The same use is mentioned in Campania in the Cilento National Park (Salerno and Guarrera, 2008) and in Montecovino Rovella (De Natale and Pollio, 2007), in Tuscany (Camangi *et al.*, 2003), in Sicily (Attaguile *et al.*, 1978), in Apulia (Maccioni *et al.*, 2001), in Lucania (Pieroni and Quave,

- 2005), in Turkey (Basgel and Erdemoglu, 2006) and in Algeria (Gonz'alez-Tejero *et al.*, 2008).
4. An herbal tea made with floral tops is used for abdominal pain (including menstrual pains). In Campania it is mentioned for healing abdominal pain in the Cilento National Park (Salerno and Guarrera, 2008) and for stomach pain in Montecovino Rovella (De Natale and Pollio, 2007). It is used for abdominal pain in Albania (Pieroni *et al.*, 2005a). It is used in Apulia (Maccioni *et al.*, 2001) and Spain (Akerreta *et al.*, 2007a) for stomach pain.
 5. Floral tops are used to prepare a decoction with other species or only with sodium bicarbonate and the vapors are inhaled for cough.
 6. Floral tops are used to prepare a digestive decoction with other plants which may be drunk also by kids. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005), in Tuscany (Camangi *et al.*, 2003), in Sicily (Attaguile *et al.*, 1978) and in Albania and Spain (Gonz'alez-Tejero *et al.*, 2008).
 7. An herbal tea made with floral tops is used as compresses on inflamed eyes in order to wash them. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008), in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003), in the Marche region (Pieroni *et al.*, 2004), in Apulia (Maccioni *et al.*, 2001) and the plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005).
 8. An herbal tea made with floral tops is used for neuralgia and toothache. The same preparation in Abruzzi (De Simoni and Guarrera, 1994) is used for headache.
 9. Floral tops of chamomile are mixed to other species to prepare a diuretic decoction.
 10. Floral tops of chamomile are mixed to other species to prepare a decoction for kidney problems.
 11. A tea spoon of floral tops are boiled in olive oil with a 5 cm thick bunch of *Ruta chalepensis* for 5 minutes. This oil is then used as massages for muscular pain. This plant is used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).
 12. The whole plant was boiled and then applied on dislocations.

This plant was used firstly in ancient Egypt and then by Greek and Romans as anti-fever, emmenagogue, and antispasmodic. Nowadays, in Egypt floral tops are used as digestive, antifever, tonic, and stimulant and for wounds and allergies (Tomei and Maccioni, 1995).

Melissa officinalis L. subsp *altissima* Arcangeli ("melissa")

1. Dried crumbled leaves are infused in water to prepare a beverage with sedative properties. The same use is reported in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003). Aerial parts are used in Spain for the same purpose (Akerreta *et al.*, 2007b). This plant is mentioned for similar problems in Cyprus (Gonz'alez-Tejero *et al.*, 2008).

Mentha sp. pl. (*Mentha aquatica* L. subsp *aquatica*, *Mentha spicata* L., *Mentha x piperita* L.)

1. Mint leaves are used to prepare a liqueur which is drunk as digestive. Walnut husks along with *Pimpinella anisum* seeds and leaves of *Mentha x piperita* are macerated in alcohol to prepare a digestive liqueur in Piemonte (Longhi and Scanavino, 1986). *Mentha spicata* is used to prepare digestive spirits (Pieroni, 1999a) or a digestive decoction (Tomei *et al.*, 1996) in Tuscany, while a herbal tea made with *Mentha x piperita* is drunk as digestive in the same region (Camangi *et al.*, 2003). Mint leaves are eaten for digestive purposes in Apulia (Maccioni *et al.*, 2001). In Sardinia (Atzei *et al.*, 1991) an herbal tea made with *Mentha aquatica* is considered digestive. *Mentha aquatica* is used as stomachic in Sicily (Attaguile *et al.*, 1978). *Mentha spicata* leaves are used in Spain to prepare a digestive herbal tea (Akerreta *et al.*, 2007b) and is used for digestive problems in Cyprus (Gonz'alez-Tejero *et al.*, 2008).
2. A decoction with a good quantity of mint is used as sedative (neurologic). *Mentha x piperita* is for the same use in Algeria (Gonz'alez-Tejero *et al.*, 2008).
3. A small quantity of mint, mixed with other herbs, is used to prepare a decoction for cough. *Mentha* sp pl. are mentioned for the same use in Cilento National Park (Salerno and Guarrera, 2008). *Mentha spicata* is mentioned for respiratory problems in Cyprus (Gonz'alez-Tejero *et al.*, 2008).

4. An herbal tea made with mint leaves is used to wash the mouth to refresh it. The same use is reported in Sardinia (Atzei *et al.*, 1991). *Mentha spicata* is used in the same way in the Marche region (Pieroni *et al.*, 2004). The same use is reported in Greece (Tammaro and Xepapadakis, 1986).
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- Micromeria graeca* Benth. subsp. *graeca* (“spigandosso”, “erba di tosse”)
1. Dried small branches are used alone or along with other species to prepare a decoction to heal cough and whooping cough. In the Palestinian Mountains, Israel (Ali- Shtayeh *et al.*, 2000) *Micromeria fruticosa* Druce is used to heal problems to the respiratory system.
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- Morus alba* L. (“celse”)
1. Fruits were used to prepare a kind of syrup for cough of kids. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005).
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- Muscari comosum* (L.) Mill. (“lampacione”)
1. Bulb was eaten boiled or fried for hypertension.
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- Myrtus communis* L. subsp. *communis* (“mirtillo”, “mortella”)
1. Fruits are macerated in alcohol to prepare digestive spirits. The plant is mentioned for the same purpose in Apulia (Leporatti and Guarrera, 2004), in Sicily (Arcidiacono *et al.*, 2007) and in Sardinia (Atzei *et al.*, 1991). This plant is mentioned for digestive problems in Algeria (González-Tejero *et al.*, 2008).
 2. Shoots of this plant are mixed to shoots of *Pistacia lentiscus* and *Rosmarinus officinalis* to prepare a decoction whose vapor is inhaled for joint pain. This plant is used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).
 3. Fruits are eaten because retained good for blood circulation.
 4. Fruits are macerated in alcohol to prepare an alcoholic beverage which is drunk for menstrual pain.
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- Ocimum basilicum* L. (“basilico”)
1. Leaves are used to prepare a digestive decoction. Its leaves are used in Spain to prepare a digestive herbal tea (Akerreta *et al.*, 2007b).
 2. Leaves are used to prepare digestive spirits.
 3. Leaves of basil were applied with olive oil on pimples as resolvent. A decoction of leaves is used in the same way in the Marche region (Pieroni *et al.*, 2004).
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- Olea europaea* L. (“olivo”, “aulivo”)
1. Olive oil, or the olive oil where *Ruta chalepensis* was fried, is used to massage dislocation. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008).
 2. Olive oil along with other species is applied on wounds. A similar use is reported in Abruzzi (De Simoni and Guarrera, 1994) and in Sardinia (Ballero *et al.*, 2001).
 3. Olive oil, along with other species is applied on pimples to promote their disappearance.
 4. Olive oil, where *Ruta chalepensis* was fried, is used as massages for muscular pain. This plant is used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).
 5. Olive oil with other species is rubbed on burns and herithemas. A similar use is reported in Abruzzi (De Simoni and Guarrera, 1994) and in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003). It is mentioned for skin disease in Sardinia (Ballero *et al.*, 2001). In Liguria (Maccioni *et al.*, 1999), in Sicily (Attaguile *et al.*, 1978), in the Marche region (Pieroni *et al.*, 2004) and in Apulia (Maccioni *et al.*, 2001) olive oil is considered emollient.
 6. Olive oil, where *Ruta chalepensis* was fried, is carefully introduced in ears to heal otitis. Oil is mentioned for the same use in Sardinia (Ballero *et al.*, 2001), in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003) and in Apulia (Maccioni *et al.*, 2001).
 7. Olive leaves were mixed to *Adiantum capillus-veneris* and *Petroselinum crispum* to prepare an abortive decoction.
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- Opuntia ficus-indica* (L.) Miller (“fico d’india”, “figurina”)
1. Dried flowers or the “skin” of cladodes is used, along with other species, to heal cough, bronchitis and pneumonia. The jam is used for the same purpose in Sardinia (Ballero *et*

- al.*, 2001). This plant is mentioned for respiratory problems in Spain (González-Tejero *et al.*, 2008).
2. Dried flowers are added to a decoction prepared with many plants for stomach pain and used also for kidney problems. In Sicily an herbal tea or decoction made with flowers is believed to be good for kidney problems (Galt and Galt, 1978; Arcidiacono *et al.*, 2007) or it is used as diuretic (Lentini, 1989a). This plant is mentioned for kidney problems in Cyprus (González-Tejero *et al.*, 2008).
 3. Flowers of this plant, of *Tilia platyphyllos* and *Citrus sinensis* are used to prepare a sedative and refreshing decoction. The plant is mentioned for the same purpose in Sicily (Lentini, 1987).
 4. Crushed cladodes were applied on hematomas. The plant is mentioned for the same purpose in Sicily (Lentini, 1987). In the Palestinian Mountains, Israel (Ali-Shtayeh *et al.*, 2000) it is used for skin disease.
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- Origanum vulgare* L. subsp *viridulum* Nyman (“*origano*”, “*arechete*”)
1. Dried leaves are used to prepare an herbal tea which is drunk for cough. The same use is mentioned in Sicily (Napoli and Giglio, 2002). The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005) and in Apulia (Amico, 1974).
 2. Seeds are mixed to other species to prepare a decoction for cough. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005).
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- Ostrya carpinifolia* Scop.
1. Its bark is used to heal cough.
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- Papaver rhoeas* L. (“*papavero*”, “*papagnolo*”)
1. It was used to prepare a sedative decoction for uneasy kids. The plant is mentioned for the same use in Montecovino Rovella, Campania (De Natale and Pollio, 2007), in Lucania (Pieroni and Quave, 2005) and in Liguria (Maccioni *et al.*, 1999). In Sicily the plant is used as sedative (Attaguile *et al.*, 1978) and mentioned against insomnia (Lentini, 1987). It is used against insomnia in Tuscany (Camangi *et al.*, 2003). This plant is mentioned for a similar problem in Cyprus (González-Tejero *et al.*, 2008).
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- Parietaria* sp. pl. (*Parietaria judaica* L., *Parietaria officinalis* L.) (“*parietaria*”, “*pardana*”, “*pardale*”)
1. The crushed plant is applied on dislocations or swelling. It may be crushed and macerated in vinegar and then applied or may be warmed in olive oil and applied for the same purposes. *Parietaria officinalis* is used in the same way also in Ischia (Campania) (Vallariello, 2003). In Tuscany (Ansaldi and Tomei, 1997) *Parietaria judaica* is mixed with egg white and rags for this purpose. This use of *Parietaria judaica* is mentioned in Pliny (De Natale *et al.*, 2009).
 2. The crushed plant, or its juice, is applied on skin irritation (it is often used after *Urtica* contacts). In Tuscany (Ansaldi and Tomei, 1997) *Parietaria judaica* leaves are used for the same purpose. *Parietaria officinalis* is used in the Marche region for skin irritation (after insect bites) (Taffetani, 2005). This use of *Parietaria judaica* is mentioned in Dioscorides (De Natale *et al.*, 2009).
 3. The crushed plant, mixed with salt, or lemon juice or olive oil, where applied on bleeding wounds or hematomas. *Parietaria officinalis* is used in the same way and in Sicily (Galt and Galt, 1978) and in the Marche region (Pieroni *et al.*, 2004). *Parietaria judaica* is used for the same purpose in Tuscany (Ansaldi and Tomei, 1997) and in Palestinian area (Ali-Shtayeh *et al.*, 1998). This use of *Parietaria judaica* is mentioned in Dioscorides (De Natale *et al.*, 2009).
 4. Roots of these plants are used to prepare a decoction for cough where other plants are added. *Parietaria judaica* (whole plant) is used for the same purpose in Sardinia (Ballero *et al.*, 2001). The juice of leaves is mentioned for the same use of *Parietaria judaica* in Dioscorides (De Natale *et al.*, 2009).
 5. The whole plant is crushed and then applied on joint and muscular pain. In the case of knee joint pain a preparation of the white of an egg may be prepared and applied.

Parietaria officinalis leaves are used to heal rheumatic pain in the Marche region (Pieroni *et al.*, 2004).

6. Roots, mixed with other herbs may have diuretic properties. *Parietaria judaica* is mentioned for the same use in Lucania (Pieroni and Quave, 2005; Pieroni, 2007), in Sardinia (Atzei *et al.*, 1991), in Apulia (Maccioni *et al.*, 2001), in France (Corsica) (Parc Naturel Regional de la Corse, 1985) and in the Middle-East (Negev, Jordan and Sinai desert) (Abu-Rabia, 2005). In Liguria (Maccioni *et al.*, 1999), in the Marche region (Taffetani, 2005), in Sicily (Attaguile *et al.*, 1978) and in Greece (Tammaro and Xepapadakis, 1986) *Parietaria officinalis* L. is claimed to have diuretic properties. In Sicily (Lentini, 2000), in Cyprus (González-Tejero *et al.*, 2008) and in Israel (Dafni and Lev, 2002) *Parietaria judaica* is used to expel kidney stones. This use of *Parietaria judaica* is mentioned in Campania since XVIII century (Petagna, 1796; De Natale *et al.*, 2009).
7. Roots are mixed to other species to prepare a decoction for abdominal pain. *Parietaria judaica* is mentioned for the same use in Lucania (Pieroni and Quave, 2005), and in Sardinia (Atzei *et al.*, 1991).
8. The plant is applied on burns.
9. The whole plant is boiled in milk and the applied on rhagas. The same use for *Parietaria judaica* is mentioned for the Campania region (Cavara, 1954; De Natale *et al.*, 2009). *Parietaria officinalis* is mentioned for hemorrhoids in the Marche region (Taffetani, 2005).
10. The whole plant was crushed with *Ruta chalepensis* and then applied as disinfectant and to prevent tetanus. *Parietaria officinalis* is used in the same way as topical anti-inflammatory in Spain (Agelet and Valles, 2003).

Parietaria judaica, which grows on rocks and walls, is used to treat kidney stones maybe according to the doctrine of Signature (Dafni and Lev, 2002).

Petroselinum crispum (Mill.) Fuss (“prezzemolo”, “petrosino”)

1. Leaves and stems of parsley were used to prepare a concentrate decoction, sometimes mixed with other herbs (*Adiantum capillus-veneris* L., *Olea europaea* L.), to provoke a miscarriage. The plant is mentioned for the same use in Cilento National Park (Salerno and Guarrera, 2008), in Liguria (Maccioni *et al.*, 1999), in Tuscany (Ansaldi and Tomei, 1997) and in Lucania (Pieroni and Quave, 2005).
2. Crushed leaves are rubbed on the breast of women to reduce milk production. In Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003) an herbal tea made with leaves is used to stop lactation.

Pimpinella anisum L. (“anice”)

1. This plant is used to make digestive spirits. Fruits of this plant are used against indigestion in Jordan (Abu- Imaileh and Afifi, 2003). Walnut husks along with *Pimpinella anisum* seeds and leaves of *Mentha x piperita* are macerated in alcohol to prepare a digestive liqueur in Piemonte (Longhi and Scanavino, 1986).

Pistacia lentiscus L. (“lentisco”)

1. Buds are used to prepare a decoction with *Myrtus communis* and *Rosmarinus officinalis* and vapors are inhaled for joint pains. This plant is used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).

This plant was probably known since the Faraon period (for embalming) in Egypt and seems to have been used in this country since then. Nowadays, in Egypt it is used as analgesic, sedative and expectorant (Tomei and Maccioni, 1995).

Plantago sp. pl. (*Plantago major* L. subsp. *major* *Plantago lanceolata* L.) (“cinqueniervi”)

1. Leaves of these plants were applied on wounds. Both plants are used as anti-inflammatory in Liguria (Maccioni *et al.*, 1999). In Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003), in Sicily (Attaguile *et al.*, 1978), in Spain (Akerreta *et al.*, 2007b) and in Albania (Pieroni *et al.*, 2005a) *Plantago major* leaves are applied on wounds as well. *Plantago lanceolata* leaves are applied on wounds also in Montecovino Rovella, Campania (De

- Natale and Pollio, 2007), in the Marche region (Pieroni *et al.*, 2004; Taffetani, 2005) and in Tuscany (Camangi *et al.*, 2003).
2. These plants are added to a multi-plant decoction for cough. *Plantago lanceolata* is used in Spain for bronchitis (Akerreta *et al.*, 2007b) and in Cyprus (González-Tejero *et al.*, 2008).
 3. Leaves with olive oil were applied on dislocations. Both plants are used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).
 4. Warmed leaves, mixed with olive oil, were applied on pimples as resolvent. Both plants are mentioned for the same use, but instead of oil lard is used in the Cilento National Park (Salerno and Guarrera, 2008). Both plants are mentioned for the same use in Lucania (Pieroni and Quave, 2005). Both plants are mentioned in Veneto (Corrain, 1977) for this use on animals. In Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003) *Plantago major*, which leaves are used as resolvent for pimples, may also be cooked in milk and flour. Warmed leaves of *Plantago major* are used for pimples also in Sicily (Arcidiacono *et al.*, 2007) and in Albania (fresh leaves) (Pieroni *et al.*, 2005a). *Plantago lanceolata* leaves are applied on pimples also in the Marche region (Pieroni *et al.*, 2004).
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- Polygonum aviculare* L. s.l. (“centinodia”, “centinorich”)
1. Young shoots and roots are mixed to other species to prepare a decoction for cough.
 2. Dried plants and roots are used to prepare a diuretic decoction useful for kidney problems. It has to be boiled since the plant has released its active principles. An informant reported its use with other plants for the same purpose. This plant is used for its diuretic properties also in Sicily (Attaguile *et al.*, 1978).
 3. Dried plants and roots are used to prepare a decoction for abdominal pain. An informant reported its use with other plants for the stomach problems. This plant is mentioned for digestive problems in Cyprus (González-Tejero *et al.*, 2008).
 4. Dried plant and roots are used to prepare a decoction for liver problems.
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- Portulaca oleracea* L. subsp. *oleracea* (“purchiacchella”, “erva vasciolella”)
1. The plant is boiled and the water is drunk as digestive or for abdominal pain.
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- Prunus avium* L. (“ciliegia”, “cerasa”)
1. Peduncles of cherries are mixed with many other species to prepare a decoction used to heal cough, cold. The same use is reported in Liguria (Maccioni *et al.*, 1999).
 2. Peduncles of cherries are used to prepare a decoction (with other herbs) for abdominal and stomach pain.
 3. Peduncles of cherries (the wooden part which is among walnut kernels may be added) are used to prepare a digestive decoction.
 4. Peduncles of cherries, along with *Malva* and *Parietaria* species, are used to prepare a diuretic decoction useful for cellulites. In Tuscany (Ansaldi and Tomei, 1997) peduncles are used to prepare a depurative and slimming decoction. This plant is claimed to be diuretic in Sicily (Attaguile *et al.*, 1978).
 5. Peduncles are used to prepare a decoction (with other herbs) for kidney problems. The same use is mentioned in Albania (Pieroni *et al.*, 2005a; González-Tejero *et al.*, 2008).
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- Prunus domestica* L. (“prugna”)
1. The dried fruit is added to a decoction made with many species which is drunk to heal cough.
 2. The dried fruit is used to prepare a laxative decoction. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005), in Sicily (Attaguile *et al.*, 1978) and in Liguria (Maccioni *et al.*, 1999).
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- Pteridium aquilinum* (L.) Kuhn subsp. *aquilinum* (“spaccaprete”)
1. Fronds are used to prepare a decoction for cough.
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- Punica granatum* L. (“ranata”)
1. The juice of the fruit was drunk for prostatitis.
 2. Dried peels of the fruits are boiled and the water is drunk against diarrhea. The root bark is used for the same purpose in Sicily (Attaguile *et al.*, 1978) and in Albania (Pieroni *et*

al., 2005a). In the Palestinian Mountains, Israel (Ali- Shtayeh *et al.*, 2000), in Albania and Algeria (González-Tejero *et al.*, 2008) it is used to heal problems to the digestive system.

Pyrus communis L. (“pera”)

1. Dried fruits are mixed to other few plants to prepare a decoction against cough and cold. A very similar preparation is used in Montecovino Rovella, Campania (De Natale and Pollio, 2007).

Quercus ilex L. (“*lecino*”)

1. Its bark is boiled and used to prepare an effective ointment used for burns. The recipe is secret (there should be also olive oil and milk). Its bark is used for skin infections in Morocco, where it has also been demonstrated a moderate antibacterial activity (Berahou *et al.*, 2007).

Quercus pubescens Willd. subsp. *pubescens* (“*o cierco*”, “*quercia*”, “*cerza*”)

1. Bark is cold macerated in water for some days and then this water is applied on inflammations or skin problems. The decoction of the bark is used for many skin problems in Abruzzi (De Simoni and Guarrera, 1994).

Reichardia picroides Roth (“*lattarola*”)

1. Its roots are used to prepare a decoction, mixed with other herbs, for cough.
2. Its roots are an ingredient of a rich decoction for abdominal pain.
3. Its roots are used to prepare a decoction with other herbs for kidney problems.

Rosa canina L. (“*rosa*”)

1. Leaves were applied on pimples as resolvent.

Rosmarinus officinalis L. (“*rosmarino*”, “*rosamarina*”)

1. Leaves are mixed to other species to prepare a decoction for cough and cold. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005), in Apulia (Maccioni *et al.*, 2001), in Tuscany (Camangi *et al.*, 2003) and in Abruzzi (De Simoni and Guarrera, 1994). Shoots of this plant are used in Jordan for common cold (Abu- Irmaileh and Afifi, 2003). Aerial parts are used in Spain to prepare an herbal tea for the same purpose (Akerreta *et al.*, 2007b).
2. Leaves are mixed to other species to prepare a decoction for abdominal pain. The plant is mentioned for the same use in the Cilento National Park (Salerno and Guarrera, 2008) and in Lucania (Pieroni and Quave, 2005). Shoots of this plant are used in Jordan for abdominal pain (Abu- Irmaileh and Afifi, 2003). This plant is used as stomachic in Sicily (Attaguile *et al.*, 1978). Aerial parts are used as intestinal antiseptic in Spain (Agelet and Valles, 2003).
3. Leaves are cold macerated in alcohol with nettle leaves and chilly for 20 days. The alcohol is then used to massage painful knee joints. Leaves are used as anti-rheumatic in Liguria (Maccioni *et al.*, 1999) and in Apulia (Maccioni *et al.*, 2001). In Spain leaves are macerated in alcohol and then used for rheumatism (Akerreta *et al.*, 2007b). This plant is used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).
4. Shoots are mixed to shoots of *Pistacia lentiscus* and *Myrtus communis* to prepare a decoction whose vapor is inhaled for joint pain.
5. Leaves are used to prepare a concentrated decoction (liquid should remain one fifth on the starting one) which is drunk to stimulate bile production.
6. This plant was considered good for skin.

Rubus ulmifolius Schott (“*rusto*”)

1. Shoots are used to prepare a decoction along with other plants for cough. The same use is reported in Tuscany (Camangi *et al.*, 2003) and in the Marche region (Taffetani, 2005).
2. Leaves are tied on wounds along with some tomato and olive oil. The plant, without tomato and olive oil, is mentioned for the same use in the Cilento National Park (Salerno and Guarrera, 2008) in Tuscany (Camangi *et al.*, 2003), in Sicily (Catanzaro, 1968; Lentini, 1987; Napoli and Giglio, 2002; Lentini, 1987), in Spain (Bonet *et al.*, 1999) and in Albania (Pieroni *et al.*, 2005a). In Liguria (Maccioni *et al.*, 1999) leaves are used as

anti-inflammatory. *Rubus fruticosus* L. leaves are used for the same purpose in the Marche region (Pieroni *et al.*, 2004).

3. Shoots were cold macerated and the water was drunk for abdominal pain. The same use is reported in Tuscany (Camangi *et al.*, 2003).
4. Shoots are used to prepare a refreshing decoction against bloated stomach and abdominal pain
5. Shoots were used to prepare a decoction with *Urtica* against abdominal pain. The same use is reported in Sardinia (Atzei *et al.*, 1991) and in Spain (Akerreta *et al.*, 2007b).

Ruscus aculeatus L. (“scannasorici”)

1. Roots are used to prepare a decoction that has boil till it remains one third of the initial quantity that should be drunk for 8 days against colitis.

Ruta chalepensis L. (“ruta”, “u fetente”)

1. Floral tops and branches are cooked (preferably in olive oil) and then the oil produced is used for massages on joints, dislocations, and for muscular pain. *Ruta graveolens* is used instead of this plant, but for the same reason in Apulia (Maccioni *et al.*, 2001), in Lucania (Pieroni and Quave, 2005; Pieroni, 2007) and in Campania in Montecovino Rovella (De Natale and Pollio, 2007) and in the Cilento National Park (Salerno and Guarrera, 2008). *Ruta chalepensis* is used for arthritis in Jordan (Abu- Irmaileh and Afifi, 2003).
2. Branches are put in bottle of “grappa” which after that is claimed to be digestive. In Liguria (Maccioni *et al.*, 1999) and Algeria (Gonz’alez-Tejero *et al.*, 2008) the plant is considered digestive as well. The same use is reported in Tuscany (Pieroni, 1999a). *Ruta graveolens* is mentioned for the same use in Lucania (Pieroni and Quave, 2005).
3. Crushed plant parts are rubbed on aching body parts, for arthritis and rheumatisms. In Sicily the plant is used in this way (Galt and Galt, 1978) or it is macerated in alcohol and then applied for rheumatisms (Arcidiacono *et al.*, 2007). The same use is reported in Liguria (Maccioni *et al.*, 1999). In the Palestinian Mountains, Israel (Ali- Shtayeh *et al.*, 2000) is used for the same purpose. This plant is used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990). The same use is reported in the Cilento National Park (Salerno and Guarrera, 2008) for *Ruta graveolens* L.
4. Crushed plant part and garlic were used as antihelminthic. The same use is reported in Tuscany (Ansaldi and Tomei, 1997) and a decoction of leaves may be used as well. In Sicily it is reported the use of a decoction made with this plant (Lentini, 1989a) or leaves are just smelled for the same purpose (Arcidiacono *et al.*, 2007). *Ruta graveolens* is mentioned for the same use in Lucania (Pieroni and Quave, 2005), in Liguria (Maccioni *et al.*, 1999), in Abruzzi (De Simoni and Guarrera, 1994) and in Sardinia (Ballero *et al.*, 2001).
5. Plant parts are boiled, crushed and the applied on wound or for rheumatisms. The plant is pounded and applied on wounds in Sicily (Galt and Galt, 1978).
6. Plant parts are fried in olive oil (or rubbed with olive oil) on pimples as resolvent.
7. Three floral tops are fried in oil which is then carefully introduced with cotton in the ear for otitis. A similar use is reported in the Palestinian area (Ali- Shtayeh *et al.*, 1998).
8. Tops and leaves are boiled in water which is then used for compresses on eyes. The same use is mentioned in Tuscany (Ansaldi and Tomei, 1997). It is noteworthy that the use of rue for eyes is reported in the *Regimen Sanitatis Salernitanum* a collection of oral knowledge of the “Scuola Medica Salernitana” firstly published in 1479 (Apolito, 1989).
9. Plant parts are macerated in olive oil which is then applied on burns and erithemas.
10. The plant is used to prepare a decoction which is then used for compresses on joint pain.
11. Crushed *Ruta chalepensis* and *Parietaria* plant parts were rubbed on wounds to prevent infections and tetanus
12. This plant was macerated in camphorated oil which is then used for massages on tired muscles. *Ruta graveolens* leaves are macerated in alcohol and used for the same purpose in the Marche region (Pieroni *et al.*, 2004). *Ruta graveolens* is mentioned in the pharmacopoeia of 28 countries (Cinigia *et al.*, 2009).

Salvia officinalis L. (“salvia”, “sappia”)

1. Leaves of sage are used to prepare a decoction for cough and bronchitis, less frequently are added to mixed plant decoction used for the same purpose. The plant is mentioned for the same purpose in Lucania (Pieroni and Quave, 2005), in Liguria (Maccioni *et al.*, 1999), in Albania (Pieroni *et al.*, 2005a) and in Spain (Akerreta *et al.*, 2007b).
2. Sage leaves are mixed to other species to prepare a decoction for stomach and abdominal pain. Aerial parts are used in Spain to prepare a herbal tea for menstrual pain (Akerreta *et al.*, 2007b). This plant is mentioned for digestive problems in Albania (González-Tejero *et al.*, 2008).
3. Leaves are chewed for disinfecting gums. The same use is reported in Tuscany (Camangi *et al.*, 2003). Boiled leaves are rubbed on gums for the same purpose in Apulia (Maccioni *et al.*, 2001). An herbal tea made with leaves is used for the same purpose in the Marche region (Pieroni *et al.*, 2004). The plant is mentioned for the same purpose in Turkey (Basgel and Erdemoglu, 2006).
4. Sage leaves are used to prepare a decoction which is drunk to stimulate appetite. In Liguria (Maccioni *et al.*, 1999) and in Tuscany (Ansaldi and Tomei, 1997) and in Sardinia (Atzei *et al.*, 1991) leaves are used as stomachic.
5. Sage leaves are mixed to other species to prepare a diuretic decoction.

Sambucus nigra L. (“sauccho”)

1. Roots are macerated in alcohol to prepare digestive spirits.
2. Leaves were used for wounds. A very similar preparation is used in Montecovino Rovella, Campania (De Natale and Pollio, 2007). The plant is mentioned for the same purpose in Abruzzi (De Simoni and Guarrera, 1994) and in Tuscany (Ansaldi and Tomei, 1997). Fresh leaves or a decoction of small branches and flowers are used for skin problems in Sardinia (Atzei *et al.*, 1991). Its bark is used for wounds in Spain (Akerreta *et al.*, 2007b).
3. Fresh branches were simply put on the stomach to relieve abdominal pain. Even if it could seem a ritual use there was no mention on something close to a ritualistic procedure. This plant is considered “sanctified” in Lucania (Quave and Pieroni, 2002).

Santolina neapolitana Jordan et Fourr. (“nervi bianchi”)

1. This plant was used to prepare a decoction (“fumiento”) which vapors were inhaled to relieve cough. A different *Santolina* is used in Tuscany (Ansaldi and Tomei, 1997) for cold.

Solanum lycopersicum L. (“pomodoro”, “pummarola”)

1. Slices of tomatoes are rubbed on bee and insect bites and (in case the bee sting remains in the wound) a hollow key is pushed on the wound to make the sting get out.
2. Slices of tomatoes are rubbed on irritations provoked by fishes
3. The juice of tomato or of lemon is used as hand disinfectant.
4. Juice of tomato and leaves of *Rubus ulmifolius* and olive oil are applied on wounds.
5. Dried shoots of tomatoes are used to prepare a decoction to heal hemorrhoids.
6. Slices of tomatoes and sugar were applied on pimples as resolvent. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008), in Tuscany (Ansaldi and Tomei, 1997) and in Liguria (Maccioni *et al.*, 1999).

Solanum tuberosum L. (“patata”)

1. Slices of raw tubers were tied on the forehead to relieve headache and lower fever. The same use is mentioned in Apulia (Maccioni *et al.*, 2001), in Tuscany (Ansaldi and Tomei, 1997) and in Albania (Pieroni *et al.*, 2005a). In Liguria (Maccioni *et al.*, 1999) potatoes are used against headache as well.
2. Crushed potatoes or slices of potatoes are rubbed on burns; milk may be added to the poultice. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008), in the Marche region (Pieroni *et al.*, 2004) and in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003). The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005). In Liguria (Maccioni *et al.*, 1999) and in Sicily (Attaguile *et al.*, 1978) its tuber is used as emollient.

3. Slices of potatoes were put on red eyes (when there are splinters of metal in there, as for example after soldering). The same use is reported in Tuscany (Camangi *et al.*, 2003). The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005), in the Marche region (Pieroni *et al.*, 2004) and in Apulia (Maccioni *et al.*, 2001).
 4. A decoction of bay leaves is added to mush potatoes and eaten to relieve gastritis.
-
- Sonchus asper* (L.) Hill subsp *asper* ("cardone")
1. To eat raw or boiled leaves is claimed to be a panacea for stomach problems. The same use is mentioned in Apulia (Maccioni *et al.*, 2001).
 2. The plant is used to prepare a refreshing decoction.
 3. Roots, mixed with other plants are used to prepare a decoction for cough.
 4. Crushed leaves were rubbed on wound to stop bleeding. In Apulia (Maccioni *et al.*, 2001) the plant is applied on wounds as well.
-
- Sonchus oleraceus* L. ("cardillo")
1. Crushed roots are used to prepare a decoction along with other plants to heal cough.
 2. Crushed roots are used to prepare a decoction along with other plants to heal abdominal pain.
 3. A decoction with its roots and other plants is used for kidney problems. The same use is reported in the Marche region (Taffetani, 2005).
-
- Sonchus tenerrimus* L. ("cardillo")
1. Its roots are an ingredient of a decoction used against cough. It is not an essential ingredient.
 2. Roots are mixed with other herbs to prepare a decoction for abdominal pain. It is not an essential ingredient.
-
- Sparganium junceum* L. ("ginestra")
1. Flowers are used as depurative. In the whole plant, but especially in the seed is contained an alkaloid (cytisine) which is potentially harmful (Harborne and Baxter, 1983; Lentini, 1989b).
-
- Teucrium chamaedrys* L. s.l. ("camedia", "camedre")
1. This plant may be cold macerated and used to prepare a decoction against abdominal pain. The decoction of this plant is used for stomach problems in Apulia (Maccioni *et al.*, 2001) and for gastroenteritis (Ansaldi and Tomei, 1997) and to disinfect the gastro-intestinal tract in Tuscany (Camangi *et al.*, 2003). In the Palestinian Mountains, Israel (Ali- Shtayeh *et al.*, 2000) it is used to heal problems to the digestive system.
 2. The decoction of this plant was used to stimulate the appetite of kids. The same use is reported in the Cilento National Park (Salerno and Guarrera, 2008) and in Liguria (Maccioni *et al.*, 1999).
-
- Thymus longicaulis* C. Presl subsp *longicaulis* ("timo")
1. Leaves are used to prepare a decoction against cold and cough.
-
- Tilia platyphyllos* Scop. s.l. ("tiglio", "teglia")
1. Dried flowers and leaves are used to prepare a decoction with other herbs to heal cough and bronchitis. The same use is reported in Spain (Agelet and Valles, 2003).
 2. Flowers are used to prepare a decoction with other plants for abdominal pain.
 3. Flowers of this plant and of *Opuntia ficus-indica* and *Citrus sinensis* or mixing other species are used to prepare a decoction with sedative and refreshing properties. The plant is mentioned for the same purpose in Spain (Akerreta *et al.*, 2007b).
 4. Flowers are used to prepare a rich decoction for kidney problems.
 5. Flowers are used to prepare a decoction for headache.
-
- Ulmus minor* Miller s.l. ("iulmo")
1. Flowers are used to prepare a decoction with also *Tilia platyphyllos* flowers to heal bronchitis.
 6. The bark was used as a cicatrizing. A decoction of the bark is used for the same purpose in the Marche region (Pieroni *et al.*, 2004).
-

Urtica sp. pl. (*Urtica membranacea* Poir et ex Savigny, *Urtica urens* L.) (“*urtica*”, “*lardica*”)

1. Roots of nettles are used with other plants to heal cough. *Urtica* sp is used for the same purpose in Sardinia (Ballero *et al.*, 2001). *Urtica dioica* is used as anti-pneumonic in Spain (Agelet and Valles, 2003).
 2. Roots of these plants were used to prepare a decoction with other species for abdominal pain. The use of *Urtica dioica* for the same purpose is mentioned in Tuscany (Camangi *et al.*, 2003). *Urtica dioica* is mentioned for digestive problems in Albania and Algeria (González-Tejero *et al.*, 2008).
 3. Their leaves are macerated in alcohol with other plants and then used during massages for joint pains. A decoction of *Urtica membranacea* is used for rheumatisms in Sicily (Arcidiacono *et al.*, 2007). An herbal tea made with *Urtica* sp is used for the same purpose in Sardinia (Ballero *et al.*, 2001). The use of *Urtica dioica* L. for anti-rheumatic massages is reported in Montecovino Rovella, Campania (De Natale and Pollio, 2007), in the Marche region (Pieroni *et al.*, 2004) in Spain (Akerreta *et al.*, 2007b) and in Greece (Tammaro and Xepapadakis, 1986). Both plants are used as anti-rheumatic in Cyprus (Arnold *et al.*, 1990).
 4. To touch the plant may heal headache.
 5. Leaves are used to prepare a decoction to wash feet (it has refreshing properties).
 6. These plants are used to prepare a decoction with laxative properties. The same use is reported in Tuscany (Ansaldi and Tomei, 1997).
-

Vicia faba L. (“*fava*”)

1. A seed is slowly chewed (as a candy) to reduce stomach acidity.
-

Vitis vinifera L. s.l. (“*uva*”)

1. Boiled wine, to which may be added lemon peels, dried figs and apples, is drunk (and sometimes its vapors are also inhaled) against cold and cough. The plant is mentioned for the same use in Lucania (Pieroni and Quave, 2005) and in Tuscany (Ansaldi and Tomei, 1997). This remedy is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula.
 2. Two glasses of wine with sugar after meals are drunk against menstrual pains. The same use is reported in Sardinia (Ballero *et al.*, 2001).
 3. Wine is externally applied on wounds. The same use is mentioned in the Marche region (Pieroni *et al.*, 2004).
 4. Buds of grapes were used to prepare eyewash. The same use is mentioned in Apulia (Maccioni *et al.*, 2001). In Lucania the plant is mentioned to be used to relieve eye inflammations (Pieroni and Quave, 2005).
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3.3 AROMATIC AND FOOD PLANTS

Food use is changing very fast on all continents. In Europe, the fast changing socio-economic conditions, especially the lack of time and the disconnection between older and younger generations, threaten the persistence of the remained knowledge about wild plants (Pieroni *et al.*, 2005b; Schunko and Vogl., 2009). In industrialized countries, in fact, there is a considerable rise in expenditure for convenience food (pre-prepared or ready made dishes). At the same time, nutraceuticals and functional foods are a rapidly growing segment of the market. Concurrently, there is a dramatic and un-revocable loss of “local knowledge” regarding food use, which forms the basis of many cultural traditions (Nebel *et al.*, 2006).

Many researches, however, recognized the high nutritional value of no crop plants, native of the Mediterranean basin, as an important resource and an important topic of research (Guil Guerrero *et al.* 1998; Trichopoulou *et al.*, 2000; Pieroni *et al.*, 2002; Couladis *et al.*, 2003; Tarwadi and Agte, 2003; Zeghichi *et al.*, 2003; The Local Food-Nutraceutical Consortium, 2005).

In Amalfi Coast, many plants are still used as food or to prepare alcoholic beverages; some species are used for their aromatic flavor. Some wild edible plants are used in traditional recipes.

All species still used or used in the past, along with the kind of use are listed in Tab. 3.3 (see ATT. 3.4): precisely, 79 plants are or were consumed raw or cooked as food, with a total of 155 different uses reported; 26 species are used to prepare 27 different alcoholic beverages (the ones with digestive properties (12) are listed among medicinal species) and finally the aromatic species are 21 and are listed separately (Tab.3.4, see ATT. 3.5). Some wild plants are used as vegetables (leaves, young shoots, or stems) (the 39% of uses), a few for their roots or bulbs (5% of uses), floral tops and flowers (6%), fruits (37%) and seeds (13% of uses). However, in few cases, different parts of the same species may be use for different uses, as for example *Borago officinalis* (flowers, leaves) and *Foeniculum vulgare* (fruits and leaves).

Most species are still consumed by inhabitants of Amalfi Coast and the main part of uses (73%) is still present, a little percentage of uses is disappearing (6%) and the rest is referred to the past. Moreover, the detailed explanation of the use and its correlation with similar uses in other parts of Italy and Mediterranean countries is reported below, along with the corresponding vernacular name (between brackets) of the species. Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use.

Food plants

Very common uses, as for example the eating of many fruits, were not reported by informants, probably because not retained traditional. For this reason they are not listed among the following uses.

Allium cepa L. (“cipolla”)

1. Bulb is used to prepare a typical dish called “*solari*”: round slices of solid “polenta” are alternate with onions and beans.
2. Bulb was eaten raw with bread and tomatoes as a simple lunch by farmers.
3. Bulb was eaten roasted with sardines on the dust of a bonfire by sailors back from fish hunting.

Allium sativum L. (“aglio”)

1. Bulb is used to prepare a typical dish the “*mevuza ripiena*” (stuffed spleen). A spleen is stuffed with garlic, parsley and chilly and is cooked in vinegar. It should be eaten cool.

Arbutus unedo L. (“sovero peloso”, “sorvo peloso”)

1. The fruit is eaten raw or it is used to prepare jams. The same use is mentioned in Sicily (Galt and Galt, 1978; Raimondo and Lentini, 1990; Lentini, 2000; Arcidiacono *et al.*, 2007) and its islands (Catanzaro, 1968; Lentini *et al.*, 1995), in Apulia (Leporatti & Guarrera, 2004), in Sardinia (Atzei *et al.*, 1991) and in Lucania (Pieroni *et al.*, 2005b).

Asparagus acutifolius L. (“asparagi”)

1. Turions are eaten raw or simply boiled. Turions are boiled also in Tuscany (Pieroni, 1999a), in Lucania (Pieroni, 2007) and in Sardinia (Atzei *et al.*, 1991) and in Cyprus (Della *et al.*, 2006).
2. Turions are used to dress pasta and prepare risottos.
3. Turions are used to prepare omelets. This use is reported also in the Cilento National Park (Salerno and Guarrera, 2008), in Sicily (Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007; Lentini, 2000), in Tuscany (Pieroni, 1999a), in the Marche region (Taffetani, 2005) and in Lucania (Pieroni *et al.*, 2005b).

Borago officinalis L. (“borragine”, “verraccia”)

1. Leaves or flowered tops are cooked and eaten with stockfish.
2. Leaves are also boiled and eaten with beans or lentils. In Sicily (Galt and Galt, 1978; Lentini, 1989a; Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007), Liguria (La Rocca *et al.*, 2008), Tuscany (Tomei *et al.*, 1996; Pieroni, 1999a), in Ischia (Campania) (Vallariello, 2003) and in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007) leaves are boiled or added to soups. In Cyprus (Della *et al.*, 2006) leaves are boiled.
3. Leaves are fried in batter. The same use is reported in the Cilento National Park (Salerno and Guarrera, 2008) and in Liguria (La Rocca *et al.*, 2008). In Tuscany for the same purpose are used inflorescences (Pieroni, 1999a).
4. Leaves are used to make handmade green pasta.
5. Minced flowers are used to stuff ravioli. In Tuscany for the same purposed are used leaves (Pieroni, 1999a).

Brassica fruticulosa Cirillo subsp *fruticulosa* (“broccoli selvatici”)

1. Leaves are cooked and then sauté in a pan.

Brassica oleracea L. s.l. (“minestra”, “minestra nera”, “verdura nera”)

1. This vegetable is an irreplaceable ingredient of typical soups made with wild weeds and less valuable parts of pork as for example the “*minestra maritata*”, “*minestra selvaggiola*” and the “*ammesca*”. The first one is an Easter traditional dish and it is prepared with *Reichardia picroides*, *Sonchus asper* subsp. *asper*, *Lactuca serriola*, *Foeniculum vulgare* and bones, fat and other poor parts of pork. Another soup is made with *Brassica oleracea*, *Sonchus asper* subsp *asper* and beans. This soup is mentioned also in Amalfi (1890) along with other traditional uses of the Sorrento Peninsula.
-

2. This vegetable is also eaten “*scuppiata*”: it is fried with chilly and garlic and then used as side dish with ears and face parts of pork.
 3. Leaves are used to prepare a vegetable timbale.
-
- Brassica rapa* L. (“*rape*”)
1. Turnips were boiled and eaten with sausages.
-
- Calamintha nepeta* (L.) Savi s.l. (“*nepeta*”, “*nepetella*”)
1. Leaves are used to prepare spirits.
-
- Capsicum annuum* L. (“*peperoncino*”)
1. Fruits are used to prepare a typical dish the “*mevuza ripiena*” (stuffed spleen).
 2. Fruits are used to prepare spirits.
 3. A variety of chilly, called “*chiochere*”, is less spicy and is boiled and put under vinegar.
-
- Castanea sativa* Miller (“*castagne*”)
1. Chestnuts are boiled or roasted and flavored with salt and bay leaves. They may be eaten with dried figs and walnuts. In Lucania are boiled with bay leaves (and fennel) or roasted (Pieroni *et al.*, 2005b; Pieroni, 2007). In Sicily (Arcidiacono *et al.*, 2007) and Tuscany (Pieroni, 1999a) are eaten boiled or roasted without adding seasoning
 2. Chestnuts are used to prepare cakes as “*zeppolelle*”, or “*castagnaccio*” (this last one is less common than in the past and is shared in the Cilento National Park (Salerno and Guarrera, 2008).
 3. Chestnuts are used to prepare jackdaws with salty ricotta cheese.
- Teens in the past were used to take with them some roasted chestnuts in their pockets.
-
- Centranthus ruber* (L.) DC. subsp. *ruber* (“*cannaviello*”, “*grassollo*”)
1. Leaves are eaten raw in salads or boiled as side dish. It was more common in the past. Now is used mainly for animals.
-
- Ceratonia siliqua* L. (“*carrube*”, “*sciuscelle*”)
1. Fruits were baked and then eaten during the Christmas time along with other dried fruit. Fruits are eaten in the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Napoli and Giglio, 2002).
 2. Fruits are used to prepare a liqueur.
 3. Fruits were ground and macerated to obtain alcohol.
 4. Fruits were used to obtain sugar.
 5. Fruits were used to prepare jams.
-
- Chenopodium album* L. (“*carota*”)
1. Young leaves were used to prepare a soup with other herbs. Young leaves are eaten in the Cilento National Park (Salerno and Guarrera, 2008). Leaves are boiled and stewed in Tuscany (Pieroni, 1999a), in Lucania (Pieroni *et al.*, 2005b) and in Albania (Pieroni *et al.*, 2005a).
- This plant is very rich in vitamin C and vitamin A (Aliotta and Pollio, 1981)
-
- Cichorium intybus* L. (“*cicoria selvatica*”)
1. Leaves are boiled and then eaten. The plant is mentioned for the same purpose also in Sicily (Galt and Galt, 1978; Lentini, 1989a; Lentini, 2000; Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007), in Tuscany (Pieroni, 1999a), in the Marche region (Taffetani, 2005), in Veneto (Zampiva, 1983) and in Lucania (Pieroni *et al.*, 2005b) and in Cyprus (Della *et al.*, 2006).
- It is reported as a food plant in France (Meilleur, 1982).
-
- Citrus limon* (L.) Burm. (“*limone*”)
1. Peels are used to prepare candied fruit.
 2. Slices of the fruits are used to prepare a salad which is then seasoned with vinegar, mint leaves, salt and oil.
- The typical lemon of the Amalfi Coast is the “*sfusato amalfitano*” an IGP variety with intense aroma, few seeds and a rich juice.
-
- Clematis vitalba* L.

1. Young shoots are cooked or fried and eaten. The same use is reported in the Cilento National Park (Salerno and Guarrera, 2008), in Tuscany (Pieroni, 1999a), in Veneto (Zampiva, 1983), in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007) and in Sicily (Arcidiacono *et al.*, 2007). In Tuscany (Ansaldi and Tomei, 1997) young shoots are eaten in omelets.

Young shoots are eaten in many Italian regions (Guarrera, 2006a): this could be seen as an example of a toxic plant which may be eaten if treated in the right way: young shoots, in fact are less toxic than other plant (Pieroni, 1999b).

Corylus avellana L. (“nocciolo”)

1. Kernels are eaten raw. The same use is reported in Tuscany (Pieroni, 1999a), in the Marche region (Taffetani, 2005) and in Lucania (Pieroni *et al.*, 2005b).

It is reported as a food plant in France (Meilleur, 1982).

Cucurbita pepo L. (“zucchine”)

1. Zucchini are used to prepare the “zucchine alla scapece” a typical dish.
2. Flowers are cooked and eaten in occasion of the Saint Day of Pietre (Tramonti).
3. Fruits are dried and preserved for the winter.

Cynara cardunculus L. var. *scolymus* (L.) Benth (“carciofo”, “carciofo paesano”)

1. Artichokes are roasted and eaten. A special kind of red artichoke is widely appreciated in Sant’Egidio del Monte Albino. The wild artichokes are roasted in Lucania (Pieroni *et al.*, 2005b) and they are eaten also in Sicily (Lentini, 2000; Arcidiacono *et al.*, 2007).

Daucus carota L. s.l. (“carota selvatica”)

1. Leaves are boiled and eaten mixed with beans. In Tuscany young leaves are eaten in soups (Tomei *et al.*, 1996; Pieroni, 1999a).

Diospyros kaki Thunb. (“legni santo”)

1. Fruits are eaten raw. The same use is reported in Tuscany (Pieroni, 1999a).

Diplotaxis tenuifolia (L.) DC. (“rucola”, “arucola”, “rughetta selvatica”)

1. Leaves are widely eaten raw in salads. The same use is reported in Tuscany (Pieroni, 1999a).
2. Leaves are used to dress pasta, along with tuna fish or fresh sausages with onions.
3. Leaves are used to top pizza.
4. Leaves are mixed in the paste of a fresh cheese.

This plant is very rich in vitamin C (Aliotta and Pollio, 1981).

Ficus carica L. (“fica”, “ficozze”, “fichi”)

1. Especially in the past, but also nowadays, figs are sun dried and eaten with other dried fruits especially for Christmas. A typical preparation called “spruculata” is made with dried figs filled with almonds, walnuts, peels of tangerines, fennel seeds. Then they are stucked in a wooden stick among bay leaves, sprinkled with liqueur and baked. A similar preparation is reported for the Cilento National Park (Salerno and Guarrera, 2008). Dried figs are prepared also in Sicily (Lentini, 2000; Arcidiacono *et al.*, 2007), in Lucania (Pieroni *et al.*, 2005b) and in Cyprus (Della *et al.*, 2006).
2. Figs are eaten raw. The same use is reported in Tuscany (Pieroni, 1999a), Sicily (Lentini, 2000; Arcidiacono *et al.*, 2007), in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007) and in Cyprus (Della *et al.*, 2006).

Foeniculum vulgare Miller (“finocchietto”)

1. Leaves and fruits are added to the “minestra maritata” or to the “ammesca”, typical soups. Leaves are used to aromatize vegetable soups in Tuscany (Tomei *et al.*, 1996; Pieroni, 1999a), in Lucania (Pieroni, 2007) and in Sicily (Arcidiacono *et al.*, 2007) were they are used in the “vidduri maritata”.
 2. Leaves are boiled with other herbs and eaten with beans. Fruits may be added. A similar preparation is reported for the Cilento National Park (Salerno and Guarrera, 2008) and in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007).
 3. Leaves are fried and eaten.
-

4. Leaves are eaten raw in salads. Leaves are used to aromatize salads in Tuscany (Pieroni, 1999a) and in Cyprus (Della *et al.*, 2006).
-
- Fragaria vesca* L. subsp *vesca* (“*fragoline di bosco*”)
1. Fruits are eaten raw. The same use is reported in Tuscany (Pieroni, 1999a), in Lucania (Pieroni *et al.*, 2005b) and in Albania (Pieroni *et al.*, 2005a).
 2. Fruits are used to prepare spirits: they are macerated in alcohol for 40 days, and then syrup of water and sugar is added. Fruits are used to prepare spirits in Tuscany (Pieroni, 1999a).
 3. Fruits are used to prepare a handmade ice-cream: in equal parts in weight are mixed whipped fruits, sugar and water. Then is added lemon juice and the preparation is refrigerated.
-
- Glaucium flavum* Crantz (“*broccoli servatici*”)
1. Leaves are eaten raw in salad.
 2. Leaves are used to prepare omelets.
-
- Helianthus annuus* L. (“*girasole*”)
1. Its oil it is used to preserve tuna fish, as a substitute of olive oil.
-
- Hordeum vulgare* L. (“*orzo*”)
1. Wheat, maize and barley flour were mixed together to prepare a typical bread that may be stored for a long time.
-
- Juglans regia* L. (“*noce*”)
1. Walnuts are eaten raw.
 2. Walnuts were used to fill dried figs, along with chestnuts.
 3. Walnuts are used to fill dried pears.
 4. Walnuts were fried in olive oil and then used to dress pasta. It was a dish of the Christmas period.
-
- Juniperus communis* L. (“*ginepro*”)
1. Juniper berry are used to prepare a liqueur. The same use is reported in Tuscany (Pieroni, 1999a). In the Marche region (Taffetani, 2005) berries are macerated in “grappa” spirit.
-
- Lactuca sativa* L. (“*lattuga*”)
1. Leaves are eaten raw in salads.
-
- Lactuca serriola* L. (“*cicoria*”, “*cicoria campestre*”, “*cicoria selvatica*”)
1. It is boiled with other wild herbs or vegetables (mainly potatoes) and sometimes pork cartilages. In Tuscany (Pieroni, 1999a) and in Lucania (Pieroni *et al.*, 2005b) leaves are simply boiled.
 2. It is an ingredient of the “*minestra maritata*” soup.
 3. It is eaten raw in salads. The same use is reported in Tuscany (Pieroni, 1999a) and in Lucania (Pieroni *et al.*, 2005b).
-
- Lagenaria siceraria* (Molina) Standl. (“*sarchiapone*”)
1. This squash is peeled and deprived of seed, then is cut in some pieces (10 cm long) and fried. After that it is filled with meat and cheese and baked with tomato sauce.
-
- Malva* sp pl. *Malva cretica* Cav. s.l. *Malva neglecta* Wallr. *Malva sylvestris* L. subsp *sylvestris* (“*mavro*”, “*marmolo*”)
1. Leaves are boiled and eaten alone or with beans. *Malva sylvestris* leaves are used for vegetable soups in Tuscany (Tomei *et al.*, 1996; Pieroni, 1999a). *Malva sylvestris* are boiled in Cyprus (Della *et al.*, 2006).
 2. Floral tops are eaten raw in salads.
-
- Mespilus germanica* L. (“*nespole*”)
1. The internal part of 60 seeds has to be deprived of their pellicles and should put in 300-400 gr of alcohol for 4-5 days. Syrup of water and sugar should be added after that.
-
- Mentha* sp pl. (*Mentha aquatica* L. subsp *aquatica*, *Mentha spicata* L. , *Mentha x piperita* L.) (“*menta*”)
1. Leaves are used to prepare a typical dish the “*mevuza ripiena*” (stuffed spleen).
-

- Morus alba* L. (“celse”)
1. Fruits are eaten raw. The same use is reported in Tuscany (Pieroni, 1999a) and in Lucania (Pieroni *et al.*, 2005b).
 2. Fruits are used to prepare a liqueur.
-
- Muscari comosum* (L.) Mill. (“lampacione”)
1. The bulb of this plant is eaten raw. In the Cilento National Park (Salerno and Guarrera, 2008) is eaten as well, especially in omelets as well as in Sicily (Napoli and Giglio, 2002) and in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007) but also in Calabria, in Apulia (Casoria *et al.*, 1999) and in Cyprus (Della *et al.*, 2006).
-
- Olea europaea* L. (“aulivo”)
1. Olive oil is used to preserve different kind of food (vegetables and fish). An example is the traditional tuna fish in olive oil
 2. Olives are pickled and preserved.
-
- Opuntia ficus-indica* (L.) Miller (“fico d’india”, “figurina”)
1. Fruits are eaten raw. The same use is reported in the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Galt and Galt, 1978; Lentini, 2000; Arcidiacono *et al.*, 2007).
-
- Parietaria* sp. pl. (*Parietaria judaica* L., *Parietaria officinalis* L.) (“parietaria”, “pardana”, “pardale”)
1. Young shoots were eaten in salads.
-
- Phaseolus vulgaris* L. (“fagioli”)
1. Beans are boiled and stewed with rind and pigskin.
 2. Beans were boiled and stewed with wild greens or with potatoes.
 3. Beans are used to prepare a typical dish called “solari”: round slices of solid “polenta” are alternate with onions and beans.
 4. Beans are eaten with pasta the day of the “Madonna delle Grazie”.
 5. It was used to prepare a soup with spelt and pork bones.
-
- Picris hieracioides* L. (“cicoria selvatica”)
1. Basal leaves are eaten in salads.
-
- Pistacia lentiscus* L. (“lentisco”)
1. Fruits are used to prepare spirits.
-
- Pisum sativum* L. (“piselli”)
1. Pods were boiled and eaten with tomato and flavored with oregano.
-
- Portulaca oleracea* L. subsp. *oleracea* (“erva vasciulella”)
1. Leaves and young shoots are eaten raw in salad. The same use is mentioned in the Cilento National Park (Salerno and Guarrera, 2008), in Sicily (Galt and Galt, 1978), in Lucania (Pieroni *et al.*, 2005b), in Albania (Pieroni *et al.*, 2005a) and in Cyprus (Della *et al.*, 2006).
-
- Prunus armeniaca* L. (“albicocca”)
1. The internal part of 60 seeds has to be deprived of their pellicles and should put in 300-400 gr of alcohol for 4-5 days. Syrup of water and sugar should be added after that.
-
- Prunus avium* L. (“ciliegia”, “cerasa”)
1. Fruits are eaten raw. The same use is reported in Tuscany (Pieroni, 1999a) and in Lucania (Pieroni *et al.*, 2005b).
 2. Fruits are used to prepare jams. The same use is reported in Tuscany (Pieroni, 1999a).
 3. Seeds are used to prepare a liqueur.
- It is reported as a food plant in France (Meilleur, 1982).
-
- Prunus cerasus* L. (“cerase”, “amarene”)
1. Fruits are eaten raw. The same use is reported in Lucania (Pieroni *et al.*, 2005b).
 2. Fruits are used to prepare jams.
-
- Prunus domestica* L. (“prugna”)

1. The fruit was deprived of the seed, dried, salted and baked. After this procedure the fruit may last for a long time.
-
- Punica granatum* L. (“*ranata*”)
1. Seeds are used to prepare a liqueur.
-
- Pyrus communis* L. (“*pera pennata*”)
1. Fruits are cut in two, dried and stuffed with a walnut in the middle. Fruits are dried also in Lucania (Pieroni *et al.*, 2005b).
 2. Fruits are used to prepare a jam.
-
- Quercus ilex* L. (“*tecino*”)
1. Glands are used to prepare a liqueur.
-
- Reichardia picroides* Roth (“*lattarola*”)
1. Its leaves are eaten raw also in Sicily (Napoli and Giglio, 2002; Lentini, 2000; Arcidiacono *et al.*, 2007), in Tuscany (Pieroni, 1999a), in the Marche region (Taffetani, 2005) and in Lucania (Pieroni *et al.*, 2005b).
 2. Its leaves are eaten after boiling them also in Sicily (Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007), in Tuscany (Pieroni, 1999a) and in Lucania (Pieroni *et al.*, 2005b).
 3. Leaves are an important ingredient of the “*minestra maritata*” a typical soup made with *Brassica oleracea*, *Sonchus oleraceus*, *Sonchus asper* subsp. *asper*, fennel and other greens to which are added also pork bones and cartilages or sausages made with pork entrails. Leaves are used to prepare vegetable soups in Ischia (Campania) (Vallariello, 2003), in Tuscany (Tomei *et al.*, 1996; Pieroni, 1999a) Liguria (La Rocca *et al.*, 2008) and in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007).
-
- Rosa canina* L. (“*rosa*”)
1. Its petals were used to prepare a liqueur.
-
- Rubus ulmifolius* Schott
1. Blackberries are eaten raw or used to prepare jams. The same use is mentioned in the Cilento National Park (Salerno and Guarrera, 2008), in Sicily (Galt and Galt, 1978; Lentini, 2000; Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007) in Apulia (Leporatti & Guarrera, 2004), in Lucania (Pieroni *et al.*, 2005b), in Sardinia (Atzei *et al.*, 1991) and in France (Corsica) (Parc Naturel Regional de la Corse, 1985).
 2. Blackberries are macerated in alcohol to prepare a liqueur. The same use is reported in Sicily (Arcidiacono *et al.*, 2007).
 3. Young shoots of this plant were used to prepare omelets.
-
- Sambucus nigra* L. (“*saucce*”)
1. Flowers are used to prepare fritters. The same use is reported in Tuscany (Pieroni, 1999a).
 2. Fruits are used to prepare jams. The same use is reported in Tuscany (Pieroni, 1999a).
-
- Sanguisorba minor* Scop. subsp. *balearica* (Bourg. Ex Nyman) Munoz Garm. & C. Navarro (“*pane e’noce*”)
1. Leaves are eaten raw in salad. The same use is reported in Tuscany (Pieroni, 1999a).
-
- Silene vulgaris* (Moench) Garcke subsp. *tenoreana* (Colla) Soldano & F. Conti (“*scuppietti*”, “*scuppariellì*”)
1. Leaves are used to prepare a risotto.
 2. Leaves are cooked and stewed. The same use is reported in Tuscany (Pieroni, 1999a), in the Marche region (Taffetani, 2005) and in Sicily (Arcidiacono *et al.*, 2007). In Veneto (Zampiva, 1983) its leaves are added to vegetable soups. In Cyprus (Della *et al.*, 2006) are boiled with legumes).
-
- Solanum lycopersicum* L. (“*pomodoro*”, “*pummarola*”)
1. Tomatoes are sun dried and put under olive oil.
 2. Tomatoes are used to prepare the tomato sauce. The preparation involves all the family.
 3. Fruits were eaten raw with bread and onions as a simple lunch by farmers.
 4. Tomato sauce was dried in clay bowls to obtain a concentrate which may be then added to different sauces and dishes.
-

5. Peels of tomatoes were dried and eaten on bread.
-
- Solanum melongena* L. (“*melanzane*”, “*mulignane*”)
1. Eggplants are used to prepare a complicated cake made with fried eggplants, chocolates, nuts, almonds. It is prepared for the Saint Day of Maiori (15th of August).
 2. Eggplants are used to prepare rissoles where they replace meat (in meatball).
 3. Eggplants were peeled and salted, and then put in a clay jar with garlic, oregano and topped with olive oil and/or vinegar).
-
- Solanum tuberosum* L. (“*patata*”)
1. Potatoes were boiled and eaten with beans or wild greens (sometimes with pork bones).
 4. Potato flour (called “*farinata*”) is cooked and served with stewed tripe.
-
- Sonchus asper* (L.) Hill subsp. *asper* (“*cardone*”)
1. Young leaves are eaten raw in salads. The same use is reported in Tuscany (Pieroni, 1999a).
 2. Leaves are an important ingredient of the “*minestra maritata*” - a typical soup. Leaves are used to prepare vegetable soups in Tuscany (Pieroni, 1999a).
 3. Leaves are boiled and eaten with beans (other vegetables may be added as for example *Brassica oleracea* and fennel). Leaves are boiled in mixtures also in Tuscany (Pieroni, 1999b).
 4. Leaves are cooked in a pan with oil and garlic. The plant is eaten after being cooked also in the Cilento National Park (Salerno and Guarrera, 2008).
 5. Leaves are used to prepare the “*ammesca*” a typical soup made with wild greens. Leaves are used to prepare vegetable soups in Tuscany (Pieroni, 1999a).
 6. Leaves of this plant are mixed to *Brassica oleracea*, to prepare a vegetable timbale.
-
- Sonchus oleraceus* L. (“*cardillo*”)
1. Flowers called “*citilli*” are eaten raw.
 2. Leaves are boiled and eaten. The same use is mentioned in the Cilento National Park (Salerno and Guarrera, 2008), in Sicily (Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007), in Tuscany (Pieroni, 1999a), in Veneto (Zampiva, 1983) and in Lucania (Pieroni *et al.*, 2005b).
 3. Leaves are an ingredient of the “*minestra maritata*” a typical soup. Leaves are used to prepare vegetable soups in Ischia (Campania) (Vallariello, 2003), in Tuscany (Tomei *et al.*, 1996; Pieroni, 1999a), in Liguria (La Rocca *et al.*, 2008) and in Sicily (Arcidiacono *et al.*, 2007).
 4. Young leaves are eaten raw in salads. The same use is reported in Tuscany (Pieroni, 1999a), in Veneto (Zampiva, 1983), in Lucania (Pieroni *et al.*, 2005b) and in Cyprus (Della *et al.*, 2006).
- It has been reported that the leaves of this plant contain high levels of vitamin C and carotenoids (Guil-Guerrero *et al.* 1998).
-
- Sonchus tenerrimus* L. (“*cardillo*”)
1. Young leaves are eaten raw in salads.
 2. Leaves of this plant were stewed.
 3. Leaves are an ingredient of the “*minestra maritata*” a typical soup.
-
- Taraxacum officinale* F.H. Wigg. (“*cicoria*”)
1. Young leaves are eaten raw in salads. The same use is reported in Tuscany (Pieroni, 1999a), in Veneto, with vinegar and lard (Zampiva, 1983) and in Lucania (Pieroni *et al.*, 2005b).
 2. Leaves are boiled and then eaten with beans. Leaves are boiled in mixtures also in Tuscany (Pieroni, 1999a); leaves are boiled alone in Lucania (Pieroni *et al.*, 2005b) and in Veneto (Zampiva, 1983).
- It is reported as a food plant in France (Meilleur, 1982)
-
- Triticum aestivum* L. (“*grano*”)
1. Wholemeal flour is used to prepare a traditional pizza, topped with cherry tomatoes and basil.
-

2.	Wheat, maize and barley flour were mixed together to prepare a typical bread that may be stored for a long time.
<hr/>	
<i>Triticum dicoccoides</i> (Korn) Korn ex Schweinf. (“farro”)	
1.	It was used to prepare a soup with beans and pork bones.
<hr/>	
<i>Urtica</i> sp. pl. (<i>Urtica membranacea</i> Poirlet ex Savigny, <i>Urtica urens</i> L.) (“urtica”, “lardica”)	
1.	These plants are boiled and eaten. The same use for <i>Urtica dioica</i> is reported in Sicily (Napoli and Giglio, 2002) and also for <i>Urtica membranacea</i> (Arcidiacono <i>et al.</i> , 2007). The same use for <i>Urtica dioica</i> is mentioned in Sardinia (Atzei <i>et al.</i> , 1991) and in Tuscany (Pieroni, 1999a).
2.	Floral tops are used to stuff ravioli. <i>Urtica dioica</i> leaves are use for the same purpose in Tuscany (Pieroni, 1999a).
3.	Leaves are used to prepare a risotto. In Veneto (Zampiva, 1983) <i>Urtica dioica</i> is used for the same purpose.
4.	Leaves are used to make handmade green pasta.
5.	Leaves are used to prepare fritters.
6.	Leaves were used to top pizza.
<hr/>	
<i>Vicia faba</i> L. (“fava”)	
1.	Stems were eaten raw in salads.
<hr/>	
<i>Vitis vinifera</i> L. s.l. (“uva”)	
1.	Grapes fermented for a shorter time is used to prepare a light and sparkling wine called “lamicado”.
2.	Grapes are preserved under alcohol and then eaten.
3.	To obtain this sweet and light wine called “acquata” sugar and water was added to marcs.
<hr/>	
<i>Zea mays</i> L. (“mais”, “granoturco”)	
1.	Maize flour is used to prepare the “sciuanelle”: it is cooked in water with pepper, pecorino cheese and pork fat, after that is baked and then served
2.	Maize flour is used to make polenta.
3.	Maize flour is used to make fritters.
4.	Wheat, maize and barley flour were mixed together to prepare a typical bread that may be stored for a long time.
<hr/>	

Aromatic Plants

Species used as aromatic, thus to flavor or aromatize dishes, are listed in Tab.3.4 (see ATT. 3.5) where are also reported the plant part used, the flavored food, the number of citation for each use and if it is still present. Moreover, the detailed explanation of the use is reported below along with the corresponding vernacular name (between brackets) of the species. Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use. Since these uses are very common they will not considered for the comparison with other regions and countries. Some comparisons, especially for more peculiar uses, are reported anyway.

Allium cepa L. (“cipolla”)

1. Bulb is used to flavor meat, vegetables and pasta.

Allium sativum L. (“aglio”)

1. Bulb is used to flavor many dishes, as for example the “maruzzelle” (small snails that can be found in the mountains) which are cooked and flavored with garlic, parsley and chilly.
2. It is used to flavor zucchini “alla scapece”, a typical dish.

3. It was used to flavor eggplants (they were peeled and salted, and then put in a clay jar with garlic, oregano and topped with olive oil and/or vinegar).
-
- Balsamita major* Desf. (“*menta*”)
1. It is used to flavor as mint. This plant is used to aromatize omelets in Piemonte (Sella, 1992).
-
- Calamintha nepeta* (L.) Savi s.l. (“*nepeta*”, “*nepetella*”)
1. It is used to flavor baked chestnuts, fish and artichokes. Leaves are used to aromatize artichokes also in Tuscany (Pieroni, 1999a).
-
- Capparis spinosa* L. s.l. (“*capperi*”, “*chiappari*”, “*chiapparelli*”)
1. The young buds are dried and then put under salt. The same use is mentioned in Sicily (Arcidiacono *et al.*, 2007). In Cyprus (Della *et al.*, 2006) are put under vinegar.
 2. Young bud under salt are then used to dress pasta or to flavor the “*colatura di alici*”.
-
- Capsicum annuum* L. (“*peperoncino*”)
1. Chilly is used to flavor different dishes, especially vegetables.
-
- Citrus limon* (L.) Burm. (“*limone*”)
1. Leaves are used to flavor different kind of cheese that should be rolled in lemon leaves and then barbecued.
 2. Leaves are used to season roasted rabbit and sausages.
 3. The peels of the fruits are used to flavor the “*zeppole di Natale*” (a typical cake) or to flavor dried figs usually prepared to be eaten during Christmas holidays.
 4. Lemon juice is squeezed on “*per e’musse*” a typical dish made just with boiled pork cartilages sprinkled with salt and a little bit of oil. The juice of the fruit is used to flavor fish dishes.
-
- Foeniculum vulgare* Miller (“*finocchio*”, “*finucchiello*”, “*fenuccio*”)
1. The fruits are widely used to flavor salami and sausages. The same use is mentioned for the Cilento National Park (Salerno and Guarrera, 2008) and in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007). In Sicily fruits are used to flavor salami (Napoli and Giglio, 2002) and sausages (Arcidiacono *et al.*, 2007) as well.
 2. Fruit are used to flavor dried figs. The same use is reported in Sicily (Galt and Galt, 1978).
 3. Fruits or fresh leaves are used to season pork while it is boiling or to flavor meat dishes.
 4. Fruits are used to flavor bread and biscuits. The same use is reported in Lucania (Pieroni *et al.*, 2005b) and in Sicily (Galt and Galt, 1978).
 5. Fruits and leaves are used to season different kind of soups.
 6. Fresh leaves are used to fish dishes. The same use is reported in Sicily (Galt and Galt, 1978).
 7. Fresh leaves are used to flavor pasta. The same use is reported in Sicily (Arcidiacono *et al.*, 2007).
 8. Fresh leaves are used to flavor ricotta cheese.
 9. Fruits are used to flavor preserved olives. A similar use is reported in Sicily (Arcidiacono *et al.*, 2007), in the Marche region (Taffetani, 2005) and in Cyprus (Della *et al.*, 2006).
-
- Laurus nobilis* L. (“*alloro*”, “*lauro*”, “*lavro*”)
1. Leaves are widely used to flavor different kind of meat. Its leaves are used to flavor only pork in the Cilento National Park (Salerno and Guarrera, 2008). Leaves are used to aromatize meat in Tuscany (Pieroni, 1999a), in the Marche region (Taffetani, 2005), in Sicily (Arcidiacono *et al.*, 2007) and in Sardinia (Atzei *et al.*, 1991).
 2. Leaves are also used to flavor dried figs and chestnuts while they are boiling. Its leaves are used to chestnut in the Cilento National Park (Salerno and Guarrera, 2008) and in Tuscany (Pieroni, 1999a). Its leaves are used to flavor dried figs in Sardinia (Atzei *et al.*, 1991) and in France (Corsica) (Parc Naturel Regional de la Corse, 1985).
 3. Leaves are widely used to flavor the “*sugna*” (pork fat) or the pork blood while it is cooking.
-
- Leaves are used to scent some typical dishes in Cyprus (Della *et al.*, 2006).
-

- Mentha* sp. pl. (*Mentha aquatica* L. subsp *aquatica*, *Mentha spicata* L., *Mentha x piperita* L.) (“*menta*”)
1. Mint leaves are widely used to flavor fish dishes.
 2. Leaves are also used to flavor “*zucchini alla scapece*”, a typical dish made with fried zucchini flavored with mint, garlic and parsley and topped with vinegar and olive oil
 3. Leaves are used to season a typical lemon salad.
 4. Leaves are used to season beans and broad beans.
- Mentha spicata* leaves are used to scent some typical dishes in Cyprus (Della *et al.*, 2006)
-
- Ocimum basilicum* L. (“*basilico*”, “*basimicola*”)
1. Leaves are used to flavor beans, tomatoes and tomato sauce, potatoes. Its leaves are used to flavor especially tomato sauce in the Cilento National Park (Salerno and Guarrera, 2008).
-
- Origanum majorana* L. (“*maggiorana*”)
1. Leaves are used to flavor meat.
- Leaves are used to scent some typical dishes in Cyprus (Della *et al.*, 2006).
-
- Origanum vulgare* L. subsp *viridulum* Nyman (“*origano*”, “*arechete*”, “*aretica*”)
1. Flowered tops and branches are used to flavor tomatoes, (fresh tomatoes, tomato sauce and dried tomatoes), meat, and eggplants and to flavor the “*colatura di alici*”, potatoes and other vegetables. An uncommon uses of the past was to flavor cooked bean pods. Leaves are used to aromatize sauces also in Tuscany (Pieroni, 1999a) and many dishes in Lucania (Pieroni *et al.*, 2005b; Pieroni, 2007) and in Sicily (Arcidiacono *et al.*, 2007).
-
- Petroselinum crispum* (Mill.) Fuss (“*prezzemolo*”, “*petrosino*”)
1. It is used to flavor a typical dish: the “*mevuzza ripiena*” (stuffed spleen).
 2. It is used to flavor vegetables as for example the “*sarchiapone*”.
 3. It is used to flavor the “*maruzzelle*” (small snails that can be found in the mountains) which are cooked and flavored with garlic, parsley and chilly.
-
- Rosmarinus officinalis* L. (“*rosmarino*”, “*rosamarina*”)
1. Leaves are widely used to flavor chicken and different kind of meat. In Sicily it is used to flavor chicken (Galt and Galt, 1978) and meat (Arcidiacono *et al.*, 2007).
 2. Leaves are used to aromatize potatoes
 3. Leaves are used to aromatize dried figs.
- Leaves are used to scent some typical dishes in Cyprus (Della *et al.*, 2006).
-
- Salvia officinalis* L. (“*salvia*”)
1. Leaves are used to flavor meat and fish dishes.
-
- Satureja montana* L. s.l. (“*rosamarina*”)
1. Leaves are used to flavor meat. Leaves are used to aromatize sauces in Tuscany (Pieroni, 1999a). This plant is generically used to flavor and in Albania (Pieroni *et al.*, 2005a).
-
- Thymus* sp. pl. (*Thymus longicaulis* C. Presl subsp *longicaulis*, *Thymus striatus* Vahl) (“*timo*”)
1. Leaves are used to flavor meat.
-

3.4 PLANTS USED FOR HANDICRAFTS AND AGRICULTURE

Recognition of the importance of non-wood forest products in developed countries has grown steadily in recent years (Novellino, 2007). Ethnobotanical uses are decreasing in modern societies and this process is often due to technological instruments and tools that tend to replace traditional handicrafts (Salerno *et al.*, 2005). The technological advance has undoubtedly brought out advantages in many activities, including the manufacturing of tools and utensils for agriculture and domestic works. Anyway, many handicrafts are still produced in Amalfi Coast, even if some are disappearing or probably completely disappeared (as for example the use of *Laurus nobilis* to scent the laundry water).

Plants used for handicraft are in total 43, with 115 different uses, and are listed in Tab.3.5 (see ATT. 3.6) along with the plant part, specific present or obsolete use, and the number of citations. Moreover, the detailed explanation of the use and its correlation with similar uses in other parts of Italy and Mediterranean countries is reported below, along with the corresponding vernacular name (between brackets) of the species. Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use. As many uses are in between agricultural and domestic they have been described together. Otherwise uses related to maritime activity, since they are more particular, have been kept separated (par. 3.4.1).

Some uses are widespread in other Italian region: *Spartium junceum* is used to make brooms in Lucania (Salerno *et al.*, 2005), Marche (Guarrera, 1990), Trentino (Pedrotti and Bertoldi, 1930), Calabria (Passalacqua *et al.*, 2006) and in Sicily (Arcidiacono *et al.*, 2007) or the use of *Ruscus aculeatus* to make brooms as well. This plant is mentioned in Sardinia (Atzei, 2003) in Sicily (Arcidiacono *et al.*, 2007) and Lucania (Salerno *et al.*, 2005).

On the other hand, a certain number of uses seem to be typical of the Amalfi Coast: as for example the use of *Thymelaea tartonraira* subsp. *tartonraira* to make a broom to brush courtyards or the use of *Polystichum setiferum* for covering cover lemon orchards.

Acer opalus Mill. subsp. *obtusatum* (Waldst. & Kit. ex Willd.) Gams (“*cucchiaro*”)

1. Its wood was used to make spoons and other kitchen utensils.
2. Its wood was used to make goat collars. They are closed when the wood is still wet, after that it becomes rigid and is important for the protection of the neck of the animals.
3. Its wood is used as firewood
1. Its wood was used to carve a kind of clog.

Adiantum capillus-veneris L. (“*capelli e jenere*”)

2. Fronds are added to flower bounces.
3. Fronds are used to decorate the crèche.

Agave americana L. (“*sambruino*”, “*agavi*”)

1. Fibers were used to obtain yarn which was then used to sew sacks. Its fibers are used to sew also in Lucania (Salerno *et al.*, 2005; Guarrera, 2006a). The plant is mentioned for the

same purpose also in Sicily (Arcidiacono *et al.*, 2007) where this yarn may be used to make ropes (Raimondo and Schicchi, 1998). It is used to make ropes also in Ischia (Campania) (Vallariello, 2003), in Apulia (Leporatti and Guarrera, 2004) and in Latium (Novellino, 2007).

Alnus cordata (Loisel.) Loisel. ("autano")

1. Its wood is used as firewood.
2. Its wood is "sfilato" and used to make fruit boxes.
3. Its wood was used to make barrels for wine.

Aloysia triphylla Royle ("erba cedra", "erba cedrina")

1. It was used by putting it in the laundry water together with bay leaves and ash.
2. Bunches of the plant are used to scent linen.

Ampelodesmos mauritanicus (Poiret) T. Durand et Schinz ("o' libano", "libbano")

1. Its leaves were used to make brooms. The plant is mentioned for the same use in Sicily (Lentini and Raimondo, 1990; Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007; Nedelcheva *et al.*, 2007), Sardinia (Atzei, 2003; Nedelcheva *et al.*, 2007), Latium (Novellino, 2007), Lucania (Salerno *et al.*, 2005; Nedelcheva *et al.*, 2007).
2. Leaves were used to weave doormats but also to bottom chairs. It is used for weaving works in general in Sicily (Lentini *et al.*, 1990; Lentini, 1999).
3. Stems were used to keep piled pizzas separated.
4. The plant was used to start the fire.
5. Stems were used until 50' to make rolling shutters.

Arbutus unedo L. ("sovero peloso", "sorvo peloso")

1. Its wood is carved to make canes. The plant has to be extracted with the root and then should be roasted in hot ashes till the trunk became easy to be peeled. In this way it keeps its original color in time.

Asparagus acutifolius L. ("asparagi")

1. Thorny branches are used to decorate the crèche. The plant is mentioned for the same use in Sicily (Napoli and Giglio, 2002; Arcidiacono *et al.*, 2007).

Calamintha nepeta (L.) Savi s.l. ("nepeta")

1. Bunches of the plant were used to scent linen.

Castanea sativa Miller ("castagno")

1. Trunks are used as stakes for vineyard and orchards. The tree should be at least 12-13 years old and should be cut down in winter. After they have to be barked. The same use is reported in Sicily (Arcidiacono *et al.*, 2007).
2. Branches, small trunks and root suckers are used as stakes for vegetables.
3. Its wood is used to make door and window frames. A tree of 30-40 years or elder should be used. The plant is used in the same way in Sicily (Arcidiacono *et al.*, 2007).
4. Its wood is used to make pieces of furniture as well as in the Cilento National Park (Salerno and Guarrera, 2008), in Abruzzi (De Simoni and Guarrera, 1994) and in Sicily (Arcidiacono *et al.*, 2007).
5. Its wood is used to make barrels both for wine and food (as for example to prepare anchovies in brine and to obtain the "colatura di alici". In Ischia (Campania) (Vallariello, 2003) its wood is used for wine barrels.
6. Its wood is cooked and planed to obtain the fiber (or the bark) which are then used to weave baskets. Few people still produce these traditional baskets, produced mainly in Tramonti, which was famous along the coast for this manufacturing. The same use is reported in Ischia (Campania) (Vallariello, 2003). This species is used to make baskets in Maratea, Basilicata (Guarrera *et al.*, 2003; Salerno *et al.*, 2005).
7. Its wood is used to build wooden planking used in building. The same use is reported in Ischia (Campania) (Vallariello, 2003).
8. Wood is used as firewood. In the past was possible to receive a piece of bread in exchange for a bundle of sticks. The use as firewood is mentioned in the Cilento National Park (Salerno and Guarrera, 2008).

9. Its wood is used to build wooden beam floors as well as in the Cilento National Park (Salerno and Guarrera, 2008), in Abruzzi (De Simoni and Guarrera, 1994) and in Sicily (Arcidiacono *et al.*, 2007).
 10. Branches of chestnut are used to make handles of utensils. The same use is reported in Ischia (Campania) (Vallariello, 2003).
 11. Its wood is used to make fences. The plant is used in the same way in Sicily (Arcidiacono *et al.*, 2007).
 12. Its wood is used to make expensive doors.
 13. Branches of chestnut are used to make canes.
 14. The wood of young trees was used to make fruit boxes.
 15. Fibers are used to bottom chairs.
 16. The wood is used to make wooden stairs. The tree should be cut off on days with crescent moon to last longer. The plant is used in the same way in Sicily (Arcidiacono *et al.*, 2007).
 17. Trunks were used to make lamp posts.
 18. Branches were used to cover orchards. They were gathered on the mountains in June and then carried on shoulders.
 19. Its wood was carved to obtain a part of the windlass which was used to carry trees from the mountain to the valleys.
 20. Young root suckers (1 year old) were used to tie up faggots for calcars.
-
- Ceterach officinarum* Willd. *subsp officinarum* ("pandosco")
1. Its fronds are used to decorate the crèche.
-
- Citrus limon* (L.) Burm. ("limone")
1. Its wood was used to carve handles of utensils.
 2. The peel of the fruits were used to scent the water used for laundry.
-
- Corylus avellana* L. ("nocciolo")
1. Nutshells and seeds of olives were used to stoke braziers and warming pans to make them last for a long time.
-
- Cynara cardunculus* L. var. *scolymus* (L.) Benth ("carciofo paesano")
1. To keep the artichoke flower with squamas in the inside is put a clay bowl on it (these artichokes become red for the clay).
-
- Cytisus spinescens* C. Presl ("spinzone")
1. This plant was used to stoke calcars.
-
- Erica arborea* L. ("olice", "iolice", "orgio")
1. This plant is used to make brooms, especially the branches. The same use is reported in Campania in the Cilento National Park (Salerno and Guarrera, 2008) and in Ischia (Campania) (Vallariello, 2003), in Sardinia (Atzei, 2003; Nedelcheva *et al.*, 2007), in Latium (Guarrera, 1994; Guarrera *et al.*, 2004; Nedelcheva *et al.*, 2007; in Lucania (Salerno *et al.*, 2005; Nedelcheva *et al.*, 2007), Sicily (Raimondo and Lentini, 1990; Nedelcheva *et al.*, 2007).
 2. Branches are used to lighten fires as well as in the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Galt and Galt, 1978).
 3. The tree stump was used to make pipes. The same use is reported in Sicily (Galt and Galt, 1978).
 4. The wood of the root was used to make bowls.
-
- Fagus sylvatica* L. ("faggio")
1. Its wood is used to make canes.
 2. Its wood is used as firewood.
-
- Ficus carica* L. ("fica", "ficozze")
1. The sap of young branches was used as rennet for cheese. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008), Abruzzi (De Simoni and Guarrera, 1994) and in Sicily (Arcidiacono *et al.*, 2007). A similar use is reported in Albania (Pieroni *et al.*, 2005a).
-

Foeniculum vulgare Miller (“finocchietto”, “finocchio selvatico”, “finucchiu”)

1. The plant or the fruits are used to prepare a decoction with also bay leaves which is then used to wash, clean and scent barrels before using them. The process is called “cavara”. The same use is reported in the Marche region (Taffetani, 2005). This use is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula.
2. Wet plants were put under tomatoes in the boxes to increase their weigh.

Fraxinus ornus L. subsp *ornus* (“frasso”)

1. Small trunks and branches are used to make handles of farmyard utensils. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008). In Abruzzi (De Simoni and Guarrera, 1994) its wood is used to carve canes.
2. Its wood is used as firewood.
3. Its wood was used to carve typical clogs.
4. Trunks may be used as stakes in orchards instead of chestnut if this last one is not available.
5. Branches are used as stakes for vegetables.
6. Its seasoned wood is used to make chairs.
7. Its wood was used to makes jointer planes.

Juglans regia L. (“noce”)

1. Its wood is used to make pieces of furniture as well as in the Cilento National Park (Salerno and Guarrera, 2008).
2. Its wood is used as firewood.
3. Its wood is used to make door and window frames.
4. Nutshells and seeds of olives were used to stoke braziers and warming pans as the last for a long time.

Lagurus ovatus L. s.l.

1. The plant is used as decorative in dried flowers compositions.

Laurus nobilis L. (“alloro”, “lauro”, “o’lauro”)

1. Bay leaves and ashes were put in hot water which was then used to wash clothes.
2. Bay leaves along with fennel are used to prepare a decoction with also bay leaves which is then used to wash, clean and scent barrels before using them. The process is called “cavara”. The same use is reported in Ischia (Campania) (Vallariello, 2003).
3. Its wood is used to make canes.
4. Leaves were used to scent soap.
5. Leaves were used to scent linen.
6. Leaves are used to reduce the fat of large eels.

Lavandula angustifolia Mill. subsp. *angustifolia* (“lavanda”, “spigandosso”)

1. A bunch of floral tops with the stems are tied in a peculiar way (with the shape of a candy) and it is used to scent linen. *Lavanula* sp pl. are mentioned for the same use in Abruzzi (De Simoni and Guarrera, 1994).

Micromeria graeca Benthams subsp *graeca* (“spigandosso”, “erba di tosse”)

1. The plant was added to boiling water which was put into barrels to wash and scent them. The process is called “cavara”.

Myrtus communis L. subsp *communis* (“mortella”, “mirtillo”)

1. Leafy branches are used to decorate bunches of flowers. Branches are used to decorate wreaths of flowers in Sicily (Arcidiacono *et al.*, 2007)
2. Flexible branches are used to weave baskets. The same use is reported in Ischia (Campania) (Vallariello, 2003).
3. Its wood is used to carve shepherd canes.

Olea europaea L. (“olivo”, “aulivo”)

1. Branches and root suckers are used to weave baskets. Young suckers or root suckers are used to make baskets in Campania in the Cilento National Park (Salerno and Guarrera, 2008) and in Ischia (Vallariello, 2003), in Latium (Guarrera, 1989), in the Abruzzi

- (Guarrera, 1987) in Sicily (Lentini *et al.*, 1988; Lentini, Raimondo, 1990; Arcidiacono *et al.*, 2007) and its islands (Lentini *et al.*, 1994; 1995).
2. Olive wood was used to carve kitchen utensils.
 3. Nutshells and seeds of olives were used to stoke braziers and warming pans in order to make them last for a long time.
-
- Ostrya carpinifolia* Scop.
1. Its wood is used to carve kitchen utensils.
 2. Its wood is used as firewood. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008).
 3. Its wood is used to carve farm tools. In Abruzzi it is used to carve handles of brooms and canes (De Simoni and Guarrera, 1994).
-
- Parietaria* sp. pl. (*Parietaria judaica* L., *Parietaria officinalis* L.) (“*parietaria*”, “*pardana*”, “*pardale*”)
1. Leaves are used to clean windows. *Parietaria officinalis* is used to clean glass in Sicily (Catanzaro, 1968).
-
- Polystichum setiferum* (Forsskal) T. Moore ex Woyнар
1. Fronds were used to cover lemon orchards.
-
- Prunus avium* L. (“*ceraso*”)
1. The wood of this tree is used to make pieces of furniture. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008). In Abruzzi its wood is used to make chairs (De Simoni and Guarrera, 1994).
 2. The wood of this tree was used to carve a kind of clog.
-
- Pteridium aquilinum* (L.) Kuhn subsp. *aquilinum* (“*spaccaprete*”)
1. Fronds are used to cover cherries when they are in the basket.
 2. Fronds were used to cover plants in the orchards.
-
- Quercus ilex* L. (“*leccio*”, “*lecino*”)
1. Its wood is used as firewood and charcoal as it is resistant and may last for a long time in the fire. It is used as firewood also in the Cilento National Park (Salerno and Guarrera, 2008).
 2. Branches are used to cover lemon orchards and protect from libeccio wind that takes salty air.
 3. The plant is planted along the street to make decorative rows.
-
- Quercus pubescens* Willd. subsp. *pubescens* (“*quercia*”, “*cerza*”)
1. Its wood is used as firewood. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008).
 2. Its wood is used to make tables.
 4. Its wood was used to make wine barrels. *Quercus dalechampii* Ten. Is used for the same purpose in Sicily (Arcidiacono *et al.*, 2007).
-
- Ruscus aculeatus* L. (“*scannasorici*”)
1. This plant is put on beams where salami and cheese are hanged. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008).
 2. This plant was used to make brooms. The same use is mentioned in Sardinia (Atzei, 2003; Nedelcheva *et al.*, 2007) in Sicily (Arcidiacono *et al.*, 2007) and Lucania (Salerno *et al.*, 2005; Nedelcheva *et al.*, 2007).
-
- Salix alba* L. (“*salice*”)
1. Young branches are used to tie plants, especially grapes. This plant is often cultivated at the edge of vineyards. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008) and in Tuscany (Tomei and Gaspari, 1981).
 2. Branches are used to weave baskets. This use is shared in many regions: Cilento, Campania (Scherrer *et al.*, 2005; Salerno and Guarrera, 2008); Marche, (Guarrera, 1981; 2005), in Sardinia (Atzei, 2003) and in Sicily near Messina (Arcidiacono *et al.*, 2007) and in Ustica (Lentini *et al.*, 1994; 1995). It is used also in Latium (Acquapendente, Monti

	<p>Prenestini), in Umbria (Sugano, Monte Rubiaglio) (Guarrera, 1989; Guarrera and Lattanzi, 2001; Guarrera <i>et al.</i>, 2004), in Tuscany (Tomei and Gaspari, 1981; Beconcini <i>et al.</i>, 1984) and in many other areas (Guarrera, 2006a).</p> <ol style="list-style-type: none"> 3. Branches are used to bottom chairs. 4. A branch is fixed in the mouth of calves to wean them. 5. Its wood was used to carve typical clogs.
<i>Sambucus nigra</i> L.	<ol style="list-style-type: none"> 1. Its wood is used to carve canes. 2. The juice of the fruits was used to prepare a kind of ink. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008), in the Marche region (Taffetani, 2005) and in Abruzzi (De Simoni and Guarrera, 1994). 3. Fruits, still hanging on branches, were used to attract birds during hunting.
<i>Saponaria officinalis</i> L. (“ <i>erba saponara</i> ”)	<ol style="list-style-type: none"> 1. This plant was macerated in water for some days and then the water was used to wash clothes.
<i>Sorbus domestica</i> L. (“ <i>sorbo</i> ”, “ <i>sorvo</i> ”)	<ol style="list-style-type: none"> 1. Its wood is used as firewood. 2. The wood of this tree was used to carve a kind of clog.
<i>Spartium junceum</i> L. (“ <i>ginestra</i> ”)	<ol style="list-style-type: none"> 1. The plant was used to make brooms. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Arcidiacono <i>et al.</i>, 2007), in Lucania (Salerno <i>et al.</i>, 2005), in the Marche region (Guarrera, 1990), in Trentino (Pedrotti and Bertoldi, 1930) and in Calabria (Passalacqua <i>et al.</i>, 2006). 2. Young branches are used to tie plants, especially tomatoes. The same use is reported for the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Arcidiacono <i>et al.</i>, 2007).
<i>Thymelaea tartonraira</i> (L.) All. subsp <i>tartonraira</i> (“ <i>zampe di gallina</i> ”)	<ol style="list-style-type: none"> 1. The plant was dried and then used to make a broom to clean the courtyard.
<i>Thymus longicaulis</i> C. Presl subsp <i>longicaulis</i> (“ <i>timo</i> ”)	<ol style="list-style-type: none"> 1. This plant was boiled with fennel and the water was then used to clean and scent barrels.
<i>Vitis vinifera</i> L. s.l.(“ <i>vite</i> ”, “ <i>uva</i> ”)	<ol style="list-style-type: none"> 1. The plant needs sulphur and copper sulphate till the San Peter day. Then the vintage time is in October. 2. The preparation of wine follows lunar phases. To transfer wine is necessary the full moon and north wind, otherwise it may become turbid.

3.4.2 PLANTS USED FOR MARITIME PURPOSES

Mentions on plants used by sailor are pretty rare: the opportunity to study such a particular area as Amalfi (with is past as a maritime power, Citarella, 1968), thus is precious. Nowadays these activities are in reduction, as well as fishing activities. Species used to make tools and objects or as materials in fishing activities are 20, while the different kind of uses reported are 29 and are listed in Tab. 3.6, see ATT. 3.7). Moreover, the detailed explanation of the use and its correlation with similar uses in other parts of Italy and Mediterranean countries is reported below, along with the corresponding vernacular name (between

brackets). Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use.

It is worth to mention that all the information on maritime uses was reported by men, even if some activities, as for example the sewing of nets was mainly a female duty. Moreover, the main part of informants reporting a use of this category inhabited coastal villages and they had or still have jobs related to fishing activities.

The used plants are essentially trees or bushes, mainly growing in the Mediterranean belt, thus easier to stock up on. Some uses require a defined species, while for others a species may be replaced by another.

Some uses are shared with other Italian localities, other are only similar: as for example plants used for creels may also be used for baskets due to their flexibility: *Salix* branches were weaved to make creels but they are still used to make baskets, and this use is pretty common also in other Italian regions: Marche, (Guarrera, 1981; 2005), Tuscany (Tomei and Gaspari, 1981; Beconcini *et al.*, 1984), Latium and Umbria (Guarrera, 1989; Guarrera and Lattanzi, 2001; Guarrera *et al.*, 2004), Sardinia (Atzei, 2003), Sicily near Messina (Arcidiacono *et al.*, 2007) and in Ustica (Lentini *et al.*, 1994; 1995) and other areas (Guarrera, 2006a).

Moreover, some few uses are mentioned also in Corsica, while where not found shared uses with other Mediterranean countries.

Finally, some uses seems to be unique of Amalfi Coast: as for example the use of *Fraxinus ornus* L. subsp. *ornus* for making the oar housing and upperworks or the use of *Opuntia ficus-indica* for making ships going faster.

Ampelodesmos mauritanicus (Poirot) T. Durand et Schinz (“*o’ libano*”, “*libbano*”)

2. Leaves were used in the past to make ropes to sustain fish nets and mooring ropes. The leaves were firstly worked in hot water and then weaved; this was a typical winter activity of women. The same species is also used to makes ropes and nets in other areas of the Salerno province (Rispoli, 1957), in Apulia (Leporatti, Guarrera, 2004) and in Sicily (Arcidiacono *et al.*, 2003). Moreover, this plant is used to makes ropes used on ships and for the production of shellfish in Maratea, Basilicata (Salerno *et al.*, 2005). It is also used to makes lines, in Cilento, Campania (Scherrer *et al.*, 2005), in Sicily (Lentini, 1989a; Napoli and Giglio, 2002, Arcidiacono *et al.*, 2007) and in Sardegna (Atzei, 2003). In Latium (Guarrera, 1994) and Molise (Guarrera, 2002) the leaves of this plants are weaved to make different objects.

Castanea sativa Miller (“*castagno*”)

1. Its bark is worked and weaved to makes baskets (“*coffe*”) which were used to contain and carry the catch. The same use was detected in Toscana too, and precisely in the Argentario promontory where the baskets are called “*corbe*” (Camangi *et al.*, 2007).
2. On the other hand, chestnut wood was used to build ships and in particular upperworks.

Ceratonia siliqua L. (“*carrube*”, “*sciuscelle*”)

1. Locust bean wood was used (even if sometimes it is used even now) to make the transverse frames of ships. The use of this species for this purpose is not considered the best: if the wood of *Morus alba* L. is available, this last one is preferred.

Citrus limon (L.) Burm. f. (“*limone*”)

1. The wood of the lemon tree is used to make the “*falanghe*” which are pieces of wood, covered with greasy matter, used to facilitate the dragging of ships on the beach. Other species are used for the same purpose.
-
- Citrus sinensis* (L.) Osbeck (“*arancia*”, “*portugallo*”)
1. The wood of the orange tree was used to make the “*falanghe*” which are pieces of wood, covered with greasy matter, used to facilitate the dragging of ships on the beach. Other species are used for the same purpose, thus the choice of the wood is probably related to its availability.
-
- Fagus sylvatica* L. (“*faggio*”)
1. The European beech wood is considered flexible but also resistant and it was used to make oar blades. However, before it could be used, it had to be steamed to avoid that it could be curved or unbalanced.
-
- Fraxinus ornus* L. subsp. *ornus* (“*frasso*”)
1. Its wood is used to make the oar housing or for upperworks.
 2. The wood of this species was used to make masts because it is considered flexible and resistant. An use that could be compared to the mast making has been reported in Sicily (for making piles) (Napoli, Giglio, 2002) and in Basilicata (Guarrera, 2006a).
-
- Gossypium* sp. (“*cotone*”)
3. Nets in the past were sewed in cotton and they were boiled with water and bark of *Pinus pinea* in order to dye brown the nets.
 4. Cotton fibers were used for the caulking of ships.
 5. For the fishing of tattlers were used salty anchovies bait tied with cotton.
-
- Linum usitatissimum* L. (“*lino*”)
1. The oil obtained from flax is applied on ship wood to highlight the wood grains or the colors.
-
- Morus alba* L. (“*celso*”)
1. Its wood is used to make the transverse frames of little boats but also for curved upperworks.
-
- Myrtus communis* L. subsp. *communis* (“*mortella*”, “*mirtillo*”)
1. The myrtle branches were harvested in the maquis and then weaved to make creels. They were used together with *Olea europaea* and sometimes with *Pistacia lentiscus*. The same use, in combination with the same species but also others has been reported in Sardinia (Chierchi Paba, 1974-1977; Atzei, 2003) and in Corsica (Parc Naturel Regional de la Corse, 1985; Atzei, 2003). In some areas in Sardinia this use could have been introduced by sailors coming from Ponza and Ventotene (Latium) (Atzei, 2003). This species is used also in Latium to weave fish traps (Novellino, 2007).
-
- Olea europaea* L. (“*olivo*”, “*aulivo*”)
1. The olive branches or young root suckers were used to weave creels. Only few sailors were able to make these fish-traps as this activity was pretty complicated. The creels have mainly two shapes and different dimension which depend on the fish to be caught. The smaller one, with a double cone shape was specific to catch morays. The medium cone shaped is a lobsterpot, while the bigger one was used for fish and octopus. These kind of creels have an external cone made by olive branches and root suckers and *Myrtus communis* (and sometimes not autochthonous rushes *Juncus* sp.). The choice of use root suckers is due to the fact that they are more regular and straight. A creel made entirely of olive parts could last even for 3-4 years. Similar creels (olive and rush) have been reported in Sardinia (Mondardini, 1997; Atzei, 2003). This plant is used to weave baskets in Calabria, while creels are made only of rushes (*Juncus* sp.) and reeds (Passalacqua *et al.*, 2006).
 2. Pieces of olive wood, covered with greasy matter, are used to facilitate the dragging of ships on the beach.
-
- Opuntia ficus-indica* (L.) Miller (“*fico d’india*”, “*figurina*”)

1. Its cladodes were rubbed under the ships before a regatta in order to make them smooth in the sailing.

Pinus pinea L. (“*pigna*”)

1. This pine wood is used for the planking and bottom works because it is resinous. The importance of *Pinus pinea* in building boats is testified by the fact that this species was sacred to Poseidon in the past due to the fact that it grows on dunes and beaches and because it is useful for ships (Di Berenger, 1982). Resinous conifer species were used in ship building since the Roman period (Fioravanti, Galotta, 2005) and they are also mentioned in the Pentateuch (Di Berenger, 1982). Theophrastus (Di Berenger, 1982) asserts that the Italian stone pine is better than maritime pine to build ships. Different pine species are used for ships in some areas in Sardinia [*Pinus halepensis* Miller (Scianameo, 1994; Atzei, 2003), *Pinus nigra* subsp. *laricio* (Mondardini Morelli, 1990; Atzei, 2003)] and in Corsica [*Pinus nigra* subsp. *laricio* (Parc Naturel Regional de la Corse, 1985; Atzei, 2003)]. Even in Sicily in Pantelleria *Pinus halepensis* is mentioned for ship building Miller (Galt and Galt, 1978).
2. Nets in the past were made with cotton fibers and they were boiled in a big copper pot with water and “*zappina*” (bark of *Pinus pinea* L.) in order to dye brown the nets both for make them more resistant and mimetic (Scala, 2003). The property of making them more durable is due to tannins contained in the Italian stone pine bark. The same use has been reported also in Ischia (Campania) (Vallariello, 2003). The same process has been reported in Sardinia, La Maddelena, where cotton nets were dyed, and made resistant, with dust of bark of “*zappino*” (*Pinus* sp) (Calanca, 1994-1998; Atzei, 2003); in Santa Teresa di Gallura nets were dyed with “*lu zappinu*” (Bossolo, 2000; Atzei, 2003). In Corsica in the same method *Pinus pinea* is replaced by *Pinus nigra* Arnold subsp. *laricio* (Poir.) Maire (Parc Naturel Regional de la Corse, 1985; Atzei, 2003). In Marche region sailors of the Conero promontory were used to dye nets in red using a decoction of different pine species (especially *Pinus halepensis* Miller) (Guarrera, 1981, 2005, 2006b). In Apulia (Bianchi, Gallifuoco, 2004; Guarrera, 2006a) for the same reason was used *Pistacia lentiscus* L. In Sicily green parts of *Pistacia lentiscus* are crushed and let macerate in water to dye sailor nets (Lentini *et al.*, 1988) and creels in Pantelleria Island (Galt and Galt, 1978).

Pistacia lentiscus L. (“*lentisco*”)

1. Its flexible branches were used, together with other species to weave creels. This use is mentioned also in Ischia (Campania) (Vallariello, 2003) and it is shared in some areas of Tuscany (Camangi *et al.*, 2007) and Sardinia where it was used alone (Mondardini, 1997; Atzei, 2003) or in association with other species (Chierchi Paba, 1974 -1977; Atzei, 2003). In Sicily (Lentini *et al.*, 1995) has been reported the use of this plant to makes baskets used in agriculture.

Quercus ilex L. (“*leccio*”, “*lecino*”)

1. Its wood is used to make the transverse frames of ships and keels. In the Roman period this same species was used to build robust ships (Fioravanti, Galotta, 2005). Its use for the same purposes has been reported in Sardinia (Moris, 1837-1859; Scianameo, 1994; Atzei, 2003) and the use of this species to makes keels has been detected in Corsica (Parc Naturel Regional de la Corse, 1985; Atzei, 2003). It has been reported the use of *Quercus ilex* to build boats also in Latium (Guarrera, 1994; Guarrera, 2006a).
2. Pieces of wood, covered with greasy matter, are used to facilitate the dragging of ships on the beach. The same use is reported in Sicily (Galt and Galt, 1978) and a similar one, with more complicated structures, has been reported in Sardinia (Marteddu, 1981-1982; Atzei, 2003) to transport heavy thing on steep and rocky slopes.

Quercus pubescens Willd. subsp. *pubescens* (“*quercia*”, “*cerza*”)

1. The use of this species is very close to the Holm’s oak ones: that is to make the transverse frames of ships and keels. The origin of this use could be dated back to the Roman Empire period when it was common the use of deciduous oaks to makes the transverse frames

(Fioravanti, Galotta, 2005), while the keel of Trireme in the pre-Christian period of Theophrastus (Di Berenger, 1982) was built using durmast wood. It has been reported a similar use (to build ships) also in Sardinia (Angius, 1851; Mondardini Morelli, 1990; Sciannameo, 1994; Atzei, 2003) and in Latium (Guarrera, 1994; Guarrera, 2006a).

2. Pieces of its wood are used to make the “*falanghe*”, pieces of wood, covered with greasy matter, used to facilitate the dragging of ships on the beach.

Salix alba L. (“*salice*”)

1. *Salix* branches were weaved to make creels. Even if this use in Amalfi Coast was mentioned few times, its use to weave basket is very common in other part of Italy (Guarrera, 2006a).

Sorbus domestica L. (“*sorbo*”, “*sorvo*”)

1. The wood of this species is used to make keels.
2. Pieces of its wood are used to make the “*falanghe*”.

Ulmus minor Miller s.l. (“*iulmo*”)

6. Its wood is used to make transverse frames of ships and upperworks.
-

3.5 PLANT USED TO FEED AND HEAL ANIMALS

Plants used to feed animals

Organic zootechny is motivated by ethical reasons, by a research of a sustainable breeding, by a higher consideration for animal wellness and arises from an increasing consumer demanding for *natural* products (Bigazzi, 2007).

In Amalfi Coast animals are still fed with wild weeds, but this activity is more likely due to respect of traditional practices (in the past the gathering of weed may become a job) than to the application of an organic zootechny. All species (47) still used or used in the past, to feed animals are listed in Tab. 3.7 (see ATT. 3.8) along with the plant part used, the actuality of the use and the animal usually fed with that species.

A detailed explanation of uses is omitted as they are pretty simple and similarities with other Italian regions or Mediterranean countries are few. Anyway, species which have some use in common with other areas are reported below along with the corresponding vernacular name (between brackets) of the species.

Some uses are pretty common in other Italian regions as for example the feeding hens with *Parietaria* sp. pl. (Guarrera, 2006a) or the use of *Urtica* sp. pl. to feed turkeys [in Abruzzi (De Simoni and Guarrera, 1994), in Tuscany (Camangi *et al.*, 2003), in the Marche region (Taffetani, 2005), in Sicily (Arcidiacono *et al.*, 2007) and in Spain (Bonet and Valles, 2007)].

Some uses seem to be more peculiar as for example the feeding of rabbits with *Centranthus ruber* and *Achillea ligustica*.

Ampelodesmos mauritanicus (Poiret) T. Durand et Schinz (“o’ libano”, “libbano”)

1. It is used for cow feeding, as well as in Sicily where it is used also for donkeys (Arcidiacono *et al.*, 2007).

Brachypodium retusum (Pers.) P. Beauv. (“palero”)

1. It is used for animal feeding also in the Cilento National Park (Salerno and Guarrera, 2008).

Castanea sativa Miller (“castagno”)

1. Chestnuts are used to feed pigs as well as in the Cilento National Park (Salerno and Guarrera, 2008).

Ceratonia siliqua L. (“carrube”, “sciuscelle”)

1. The use of fruits to feed horses is reported also in the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Napoli and Giglio, 2002).

Chenopodium album L. (“carota”)

1. This plant is used to feed animals as well as in the Cilento National Park (Salerno and Guarrera, 2008).

Cynodon dactylon (L.) Pers (“ramegna”, “gramegna”)

1. This plant is used to feed animals as well as in the Cilento National Park (Salerno and Guarrera, 2008) and also in Sicily (Napoli and Giglio, 2002).

Emerus major Mill. s.l. (“chetracciu”)

1. This plant is used to feed animals as well as in the Cilento National Park (Salerno and Guarrera, 2008).
-

<i>Hordeum murinum</i> L. subsp <i>leporinum</i> (Link) Arcang. (“ <i>pascone</i> ”, “ <i>erba dei cani</i> ”)
1. This plant is used to feed animals as well as in the Cilento National Park (Salerno and Guarrera, 2008).
<i>Lobularia maritima</i> (L.) Desv. subsp <i>maritima maritima</i> (“ <i>fiori di San Giuseppe</i> ”, “ <i>cirilli di San Giuseppe</i> ”)
It is used to feed rabbits and other animals. It is used to feed animals in Sicily (Galt and Galt, 1978).
<i>Ostrya carpinifolia</i> Scop.
1. This plant is used to feed animals as well as in the Cilento National Park (Salerno and Guarrera, 2008).
<i>Parietaria</i> sp. pl. (<i>Parietaria judaica</i> L., <i>Parietaria officinalis</i> L.) (“ <i>parietaria</i> ”, “ <i>pardana</i> ”, “ <i>pardale</i> ”)
1. <i>Parietaria</i> is used to feed hens as well as in the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Galt and Galt, 1978).
<i>Quercus ilex</i> L. (“ <i>leccio</i> ”, “ <i>lecino</i> ”)
1. Glands are used to feed pigs as well as in the Cilento National Park (Salerno and Guarrera, 2008) and in Sicily (Galt and Galt, 1978).
<i>Quercus pubescens</i> Willd. subsp <i>pubescens</i> (“ <i>quercia</i> ”, “ <i>cerza</i> ”)
2. Glands are used to feed animals as well as in the Cilento National Park (Salerno and Guarrera, 2008).
<i>Rhamnus alaternus</i> L. (“ <i>scotolo</i> ”)
1. It is used to feed cows and other animals. It is used to feed goats in Sicily (Galt and Galt, 1978).
<i>Urtica</i> sp. pl. (<i>Urtica membranacea</i> Poir et ex Savigny, <i>Urtica urens</i> L.)
1. The plant is used to feed turkeys. The same use, but nettles are boiled, is reported in Abruzzi (De Simoni and Guarrera, 1994), in Tuscany (Camangi <i>et al.</i> , 2003), in the Marche region (Taffetani, 2005), in Sicily (Arcidiacono <i>et al.</i> , 2007) and in Spain (Bonet and Valles, 2007) as salutiferus. In Albania (Pieroni <i>et al.</i> , 2005a) <i>Urtica dioica</i> is used to feed pigs.
<i>Ulmus minor</i> Miller s.l. (“ <i>iulmo</i> ”)
1. <i>Ulmus</i> plants are used to feed animals as well as in the Cilento National Park (Salerno and Guarrera, 2008).
<i>Vitis vinifera</i> L. s.l. (“ <i>vite</i> ”, “ <i>uva</i> ”)
1. Leaves are used to feed cows while are used to feed goats, rabbits and pigs in the Cilento National Park (Salerno and Guarrera, 2008).

Repellent plants

In this category are listed all plants used as repellent, or rather, to keep away animals or insects. Anyway, plants used for this purpose are few (5 species) and are listed in Tab 3.8 (see ATT. 3.9) where are reported the plant part used, an indication of the use, the number of citation for each of them and if they are present or obsolete. Moreover, a brief explanation of the use and its correlation with similar uses in other parts of Italy and Mediterranean countries is reported below. These few uses are still practiced except one (*Ruta chalepensis*) and were all mentioned by a single informant except one (*Ocimum basilicum*).

Aloysia triphylla Royle (“*erba cedra*”, “*erba cedrina*”)

1.	The plant is used against mosquitoes.
<i>Citrus limon</i> (L.) Burm. (“limone”)	
1.	A lemon is put on the bedside table against mosquitoes.
<i>Laurus nobilis</i> L. (“alloro”, “lauro”, “lavro”)	
1.	Leaves of bay are put in drawers against clothes moths.
<i>Ocimum basilicum</i> L. (“basilico”, “basimicola”)	
1.	The plant is widely known and used as repellent for mosquitoes.
<i>Ruta chalepensis</i> L. (“ruta”, “u fetente”)	
1.	The plant was macerated in oil which was then rubbed on horse tails to keep rats away and avoid that they may gnaw them.

Plant used to heal animals

Veterinary practices are often similar to the ones reported for humans, maybe because often uses were firstly tested on animals. Plants used in veterinary practices are only 19 and are listed in Tab. 3.9 (see ATT. 3.10) where are also indicated the specific use and for which animal, the plant part, if the use is present or obsolete and the number of citation. Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use. Uses are disappearing as many are considered obsolete and are also cited by few informants.

Some uses are common in other Italian regions: as for example the use of *Malva* sp. in Abruzzi (De Simoni and Guarrera, 1994) and in Sicily (Arcidiacono *et al.*, 2007) for stomach problems or the use of *Sonchus oleraceus* in Sicily to help animals after delivery (Arcidiacono *et al.*, 2007).

Others few uses are shared with other Mediterranean countries: as for example the use of *Allium sativum* as antihelminthic in Croatia (Vučevat- Bajt and Karlović, 1994), the use of *Malva sylvestris* in Spain for stomach problems of cows.

Finally, some seems to be typical as for example the use of *Adiantum capillus-veneris* for the expulsion of the second placenta and the use of *Ruta chalepensis* for swelling of calf legs.

<i>Adiantum capillus-veneris</i> L.	
1.	Fronds (or fronds without leaves) were used to prepare a decoction which was given to cows after delivery to help them in the expulsion of the second placenta. The plant is mentioned for the same use in Tuscany (Uncini Manganelli <i>et al.</i> , 2001; Guarrera, 2006a)
<i>Allium cepa</i> L. (“cipolla”)	
1.	Bulbs were given to animal as disinfectant.
<i>Allium sativum</i> L. (“aglio”)	
1.	Garlic cloves is inserted in a lard ball and given to animals infested by worms. To horses and donkeys the garlic is simply given to eat for helmenthiasis. The same use is reported in Veneto (Corrain, 1977) for calves. In Croatia garlic is mixed with wine and given to horses for this affection (Vučevat- Bajt and Karlović, 1994).
<i>Apium graveolens</i> L. (“sedano”)	

1. This plant is used to feed horses as it should have diuretic properties. In Morocco (Jouad *et al.*, 2001) and in the Middle-East (Negev, Jordan and Sinai desert) (Abu-Rabia, 2005) this plant is used to solve renal problems in humans.
-
- Citrus limon* (L.) Burm. ("limone")
1. The mould that grows on lemon fruits is used as disinfectant for horses' wounds.
-
- Chenopodium album* L. ("carota")
1. This plant was mixed to other species to prepare a decoction for animals after delivery.
-
- Ceterach officinarum* Willd. subsp *officinarum* ("spaccaprete")
1. Fronds were boiled and the water was given to cows to facilitate the expulsion of the second placenta.
-
- Ficus carica* L. ("fica", "ficozze")
1. A branch of this plant is put in the mouth of rabbit (as they can chew it) when they show some swelling.
 2. A branch was given to ruminants when they could not ruminate. The irritant sap may stimulate the going back up of food.
-
- Foeniculum vulgare* Miller ("finocchietto", "finocchio selvatico", "finucchiu")
1. A decoction prepared with fennel and *Malva* sp pl was given to cows when they were sick. The whole plant is used to prepare a decoction for rabbits as digestive, in Morocco (Pieroni *et al.*, 2006). This plant is used for cows as antiseptic in Spain (Bonet and Valles, 2007).
-
- Fraxinus ornus* L. subsp *ornus* ("frassino", "frasso")
1. Bark of this plant is cold macerated in water which is then given to chicks and hens as refreshing.
 2. A small branch is cold macerated in water until it turns green. This water is given to the chicks for flu. Leaves are used in the same way and given to farmyard animals for general sickness in the Cilento National Park (Salerno and Guarrera, 2008).
 3. Its bark was cold macerated in water until the water turns green. This water was then given to pigs against diarrhea. This use is reported also in Tuscany (Camangi *et al.*, 2003) for hens and rabbits with abdominal problems.
-
- Linum usitatissimum* L. ("lino", "semenza e'lino")
1. Seeds are used to prepare a decoction which is given to cows as refreshing and antis tress. The same use is reported in Spain as ruminant antistatic (Bonet and Valles, 2007).
 2. Cows are fed with linseeds after delivery in order to facilitate the expulsion of the second placenta.
 3. Seeds are given to eat to cows for general sickness.
-
- Malva* sp pl. (*Malva cretica* Cav. s.l. *Malva neglecta* Wallr. *Malva sylvestris* L. subsp *sylvestris* ("mavro", "marmolo")
1. Roots were used to prepare a decoction which is given to cows after delivery to facilitate the expulsion of the second placenta. A similar use is reported for humans in Sicily (Napoli and Giglio, 2002).
 2. A decoction prepared with *Malva* sp pl and fennel was given to cows when they were sick.
 3. These plants are used to prepare a decoction for animals with stomach problems. The same use is reported in Abruzzi (De Simoni and Guarrera, 1994) and in Sicily (Arcidiacono *et al.*, 2007). *Malva sylvestris* is used in Spain for stomach problems (Bonet and Valles, 2007).
 4. This plant was mixed to other plants to prepare a decoction to help animals after delivery.
 5. This plant was given to eat to cows to increase their milk production. *Malva* sp is used for the same purpose in Veneto (Corrain, 1977).
-
- Opuntia ficus-indica* (L.) Miller ("fico d'india", "figurina")
1. Cladodes of this plant are cooked and given to cows to increase their milk production.
-
- Punica granatum* L. ("ranata")

1. Dried peels of the fruit are used to prepare a decoction against diarrhea.
-
- Reichardia picroides* Roth ("lattarola")
1. This plant is used to prepare a decoction with other plant species to help animals after delivery.
-
- Ruta chalepensis* L. ("ruta", "u fetente")
1. This plant is used to prepare a decoction for calves when they have swollen knees.
-
- Sonchus oleraceus* L. ("cardillo")
1. This plant was mixed to other plants to prepare a decoction to help animals after delivery. A similar use is reported in Sicily (Arcidiacono *et al.*, 2007).
-
- Umbilicus horizontalis* DC. ("cuppitielli")
1. This plant was used to prepare a decoction for animals after delivery. It is considered good enough even if not the best one for this purpose.
-
- Urtica* sp. pl. (*Urtica membranacea* Poirlet ex Savigny, *Urtica urens* L.) ("urtica", "lardica")
1. These plants are used to feed hens in order to increase their egg production.
 2. These plants were boiled and the water was given to animals as disinfectant.
-

PAR. 3.6 LESS COMMON USES: ORNAMENTAL, COSMETIC, RITUAL AND RECREATIONAL USES

Plants mentioned within these categories are few, mainly reported by few informants and obsolete. Thus, in Amalfi Coast, these uses are generally more threatened than others. The different categories are briefly described separately along with the specific uses mentioned by informants.

Cosmetic uses

“Cosmetic products” have been defined by the European Directive 93/35/EEC (European Commission, 1993) as “any substance or preparation intended to be placed in contact with the various external parts of the human body or internal of the oral cavity in order to cleaning them, perfuming them, changing their appearance and/or correcting body odors and/or protecting them or keeping them in good conditions” (Pieroni *et al.*, 2004). Plants used to heal skin affection, which should have been included in this section according to the above mentioned definition, were considered medicinal species anyway.

Cosmetic uses are listed in Tab. 3.10 (see ATT. 3.11) where are also reported the plant part used and related purpose for which they are or were used and the number of citation for each use. Furthermore, a brief description of the use and its correlation with similar uses in other parts of Italy and Mediterranean countries is reported below, along with the corresponding vernacular name (between brackets) of the species. Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use.

These uses are generally pretty simple and involve mainly aromatic plants, rich in essential oil.

Uses shared with other Italian regions or other Mediterranean countries are very few, but this is probably due to the fact that ethnobotanical researches are mainly focused on medicinal or food plants. However, it is possible to mention the use of a kind of scent water also in the Marche region (Pieroni *et al.*, 2004) in Latium (Guarrera, 1994) and in Spain (Verde López, 2002) (Pieroni *et al.*, 2004).

Aloysia triphylla Royle (“*erba cedra*”, “*erba cedrina*”)

1. Flowers of this plant, along with other species, are used to prepare a cold macerate called “*il vacile*”. The water may be used to wash the face and to make it beautiful.

Calamintha nepeta (L.) Savi s.l. (“*nepeta*”, “*nepetella*”)

1. The leaves and triturated branches of this plant, mixed with other species, are used to prepare a cold macerate called “*il vacile*”. It may contain species rich in oils which are benefic for the skin. The water should be used to wash the face the Ascension Day (on May).

Citrus limon (L.) Burm (“*limone*”)

1. Drops of lemon juice were put into the eyes to make them sparkling. The same use is mentioned in the Marche region (Pieroni *et al.*, 2004).
-

- Cucumis sativus* L. (“cetriolo”)
1. Slices of cucumber are placed on the face to purify its skin. A similar use is reported in Piemonte (Sella, 1992; Guarrera, 2006a).
-
- Mentha* sp. pl. (*Mentha aquatica* L. subsp *aquatica*, *Mentha spicata* L., *Mentha x piperita* L.)
1. The leaves and triturated branches of this plant, mixed with other species, are used to prepare a cold macerate called “*il vacile*”. It may contain species rich in oils which are beneficial for the skin. The water should be used to wash the face the Ascension Day. *Mentha suaveolens* Ehrh. is mentioned for the same use in the Marche region (Pieroni *et al.*, 2004) where this preparation is made during the St. John’s night, on 24th of June. A similar picture in the tradition of preparing popular “perfumed waters” has been recorded in Latium (Guarrera, 1994) and in Spain (Verde López, 2002) (Pieroni *et al.*, 2004).
-
- Myrtus communis* L. subsp *communis* (“*mortella*”, “*mirtillo*”)
1. Its leaves, mixed with other species, are used to prepare a cold macerate called “*il vacile*”. It may contain species rich in oils which are beneficial for the skin. The water should be used to wash the face the Ascension Day.
-
- Rosa canina* L. (“*rosa*”)
1. Petals of rose, alone or mixed with other species, are used to prepare a cold macerate called “*il vacile*”. The water may used to wash the face during the Ascension Day or the day of the “Madonna dei Vagni”. Petals may also be added to soapy water which could then be used to wash the face. The use of rose petals, but to wash only the eyes, during the Ascension Day is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula. This plant is mentioned for the same use in the Marche region (Pieroni *et al.*, 2004) where this preparation is made during the St. John’s night, on 24th of June. The same use is reported also for Latium (Guarrera, 1994).
 2. Petals of rose were also used to prepare a perfume. This plant is mentioned for the same use in the Marche region (Pieroni *et al.*, 2004).
-
- Rosmarinus officinalis* L. (“*rosmarino*”, “*rosamarina*”)
1. Its leaves, mixed with other species, are used to prepare a cold macerate called “*il vacile*”. It may contain species rich in oils which are beneficial for the skin. The water should be used to wash the face the Ascension Day.
-
- Satureja montana* L. s.l. (“*rosamarina*”)
1. Flowers and flower tops of this plant mixed with other species are used to prepare a cold macerate called “*il vacile*”. It may contain species rich in oils which are beneficial for the skin. The water should be used to wash the face the Ascension Day. This plant is mentioned for the same use in the Marche region (Pieroni *et al.*, 2004) where this preparation is made during the St. John’s night, on 24th of June.
-
- Thymus longicaulis* C. Presl subsp *longicaulis* (“*timo*”)
1. Flowers and flower tops of this plant mixed with other species are used to prepare a cold macerate called “*il vacile*”. It may contain species rich in oils which are beneficial for the skin. The water should be used to wash the face the Ascension Day. Traditionally, girls looking for an engagement were used to look for this plant in the mountains.
-
- Urtica* sp. pl. (*Urtica membranacea* Poir. ex Savigny, *Urtica urens* L.) (“*urtica*”, “*lardica*”)
1. A decoction of these plants was used to wash hair when they look greasy and against dandruff. The same use is reported in Friuli (Appi *et al.*, 1979; Guarrera, 2006a). The same use, but for *Urtica dioica*, is reported in the Marche region (Pieroni *et al.*, 2004) and also to disinfectant of the scalp (Taffetani, 2005). Different species of *Urtica* are used to prepare a decoction or a macerate wash air and to strength them in Tuscany (Ansaldi and Tomei, 1997; Camangi *et al.*, 2003) and in Spain (Akerreta *et al.*, 2007b).
-

Ritual uses

Over time, people have developed various means of curing the ill through the use of native plants and icons of their socio-religious belief system (Quave and Pieroni, 2002). Non conventional medical practices are often referred to as manifestations of things magical and in the realm of superstition and religious beliefs (Quave and Pieroni, 2002). The healing process is strengthened by the incorporation of symbolic objects, numbers, oral formulas and actions (Quave and Pieroni, 2002).

In the Amalfi Coast there are still some healers, only two informants were considered so, but they were specialized: the first one, a bone-healer man, was able to set fractures and dislocations only with hands, and another one, a woman, was an expert for muscular pains, for which she uses rue cooked in olive oil. Even if they are healer, they do not use magical formulas; however, there is still memory of some people in the past that were able to recite healing formulas.

Some practices entail the Catholic cross gesture.

The magic of threes is apparent throughout other forms of magical medicine in many diverse cultures (Quave and Pieroni, 2002) but also odd numbers since they are the favorite of gods (Scola, 1991).

In Tab 3.11 (see ATT. 3.12) are reported the plant part used for ritual and religious purposes, the specific past or present use and the number of citation for each use, while the description of the ritual is reported below (the vernacular name of the species is between brackets). Species are listed in alphabetical order, and uses are reported giving priority firstly to the number of citations and secondly to the present use.

Allium sativum L. (“aglio”)

1. Children and with worms had to smell garlic and after that someone had to make some crosses on the stomach of the kid to make worms go away. The use of this plant as antihelminthic has already been reported among medicinal uses. Only one informant indicates that this use should be accompanied by a sort of ritual.

Borago officinalis L. (“borragine”, “verraccia”)

1. Flowers of this species along with other species (the choice is not specific to the use) are thrown by kids or from windows during the Corpus Domini procession.

Calystegia silvatica (Kit. in Schrad) Griseb. (“cancola”)

1. Its flowers along with other species (the choice is not specific to the use) are thrown by kids or from windows during the Corpus Domini procession.

Centaurea cineraria L. subsp. *cineraria* (“erva bianca”, “nervo bianco”)

1. Its flowers (the choice is not specific to the use) are thrown by kids or from windows during the Corpus Domini procession.

Centranthus ruber (L.) DC. subsp. *ruber* (“cannaviello”, “grassollo”)

1. Flowers (the choice is not specific to the use) are thrown by kids or from windows during the Corpus Domini procession. A similar use is reported in Abruzzi (Manzi 2003; Guarrera, 2006a).

Chamaerops humilis L. (“palma”)

1. The leaves of this palm are tied up in order to make them get white. After, they are weaved in different forms (small baskets and flowers) and which may be blessed during the Palm Sunday. These handicrafts are then kept at home for one year. In Ischia

(Campania) (Vallariello, 2003) is reported the same use, but the palm species is different. A similar uses is reported for Tuscany in the surroundings of Lucca (Beconcini *et al.*, 1984).

Citrus sinensis (L.) Osbeck (“arancia”, “portugallo”)

1. Orange flowers were weaved to prepare a garland to wear during the First Communion celebration. In South of Italy the bouquet of the bride is made with orange flower to symbolize purity and fecundity as well as a garland to reduce attachment to earthly things.

Myrtus communis L. subsp *communis* (“mirtillo”, “mortella”)

1. Leaves were weaved to prepare a garland for important people.

Olea europaea L. (“olivo”, “aulivo”)

1. Olive oil is used in to find out if someone has the evil-eye¹ on. Drops of oil are put in a plate full of water and three crosses should be made repeating aloud some formulas observing the coalescence of drops. This procedure is very similar to another one reported for Tuscany (Pieroni and Giusti, 2002a).
2. It is retained that branches of olive are of good auspices.

Olea europaea is a sacred tree all over the Mediterranean basin (Camarda, 2005).

Opuntia ficus-indica (L.) Miller (“fico d’india”, “figurina”)

1. A cladode of this species was deprived of spines and is put on the stomach of an ill person. Some magic words should be pronounced to make the stomach pain go away. A similar use, but with no magic meaning is reported in Apulia (Maccioni *et al.*, 2001) where a cladode with some olive oil is applied on the abdomen.

Quercus pubescens Willd. subsp *pubescens* (“quercia”, “cerza”)

1. To reduce legs swollen, elder of the villages were used to gently rub branches on swollen legs to “incarninare” (solve) the problem.
2. When a kid was affected by hernia an oak not facing the sun should be cut in two and magic words were repeated aloud. Then the kid had to pass through the oak. A very similar use is mentioned for Abruzzi (De Simoni and Guarrera, 1994) and for Sicily (Napoli, 2003), where an *Ulmus minor* tree is preferably used instead of this oak.

Ruta chalepensis L. (“ruta”, “u fetente”)

1. Kids with worms had to smell the plant in order to scare worms, in fact was believed that worms appear when kids get scared. This use is mentioned also in Amalfi (1890) where are reported pretty ancient traditional uses of the Sorrento Peninsula. The use of this plant as antihelminthic has already been reported among medicinal uses, however an informant indicate that this use procedure is necessary to scare worms. It is interesting to note that rue is used as a magical plant, even if differently, also in Lucania (Pieroni and Giusti, 2002b) and in Abruzzi (De Simoni and Guarrera, 1994) and in Morocco (Merzouki *et al.*, 2000).

Solanum tuberosum L. (“patata”)

1. During Carnival some black feathers and one black feather were stuck in a potato resembling a witch face. During the Lent the feathers have to be removed except for the white ones that should be taken away the Easter day. This use is mentioned also in Amalfi (1890) where are reported traditional uses of the Sorrento Peninsula but instead of a potato it is mentioned the use of an orange.

Urospermum dalechampii Scop.

1. Flowers along with other species (the choice is not specific to the use) are thrown by kids or from windows during the Corpus Domini procession.

Triticum aestivum L. (“grano”)

1. Seeds of wheat were crushed and applied on the abdomen to extract the pain from it.

¹ The evil-eye (*malocchio*) refers to the ability of the human eye to cause, or at least to project, harm when it is directed by certain individuals towards others (Pieroni and Giusti, 2002a).

Viscum album L. (“vischio”)

1. It is retained that this plant is of good auspices. The same use is reported in Abruzzi (Tammaro, 1984; Guarrera, 2006a), in Trentino (Pedrotti and Bertoldi, 1930; Guarrera, 2006) and in the Marche region (Bellomaria, 1982; Guarrera, 2006a)
-

Ornamental

Ornamental uses are pretty simple and few (8 species) and are all present: they are reported in Tab 3.12 (see ATT. 3.13) along with the plant part used, the use and the number of citation for each use. Moreover, a brief description of the uses is reported below, along with the corresponding vernacular name (between brackets) of the species. No correlations with similar uses in other areas were found in literature.

Antirrhinum siculum Miller (“vocchia e lupo”)

1. This species may be planted in pots.
-

Calystegia silvatica (Kit. in Schrad) Griseb. (“cancola”)

1. Flowered branches may be put in a jar.
-

Campanula dichotoma L.

1. This species may be planted in pots.
-

Hedera helix L. subsp. *helix* (“edera”)

1. This species may be planted in gardens.
-

Hypericum perforatum L. (“iperico”)

1. Flowered branches may be put in a jar.
-

Myrtus communis L. subsp. *communis* (“mirtillo”, “mortella”)

1. This species may be planted in gardens.
-

Rosmarinus officinalis L. (“rosmarino”, “rosamarina”)

1. This species may be planted in gardens.
-

Spartium junceum L. (“ginestra”)

1. Flowered branches may be put in a jar.
-

Stories

Plants mentioned in a rhyme or a story reported by informants are very few (4 species) they are reported in Tab 3.13 (see ATT. 3.14) along with the story and the relative number of citation. However, the story is reported also below, along with the vernacular name (between brackets) of the species. In the past, these rhymes in the past should have been much more: many of them, indeed, are reported in Amalfi (1890), where are described the traditions of the Sorrento Peninsula.

It was found only one correlation with the Cilento National Park (Salerno and Guarrera, 2008), an area within Campania region, for the rhyme based on *Ruta chalepensis*.

Ceratonia siliqua L. (“carrube”, “sciuscelle”)

1. Each plant in the village of Conca dei Marini had a specific name in the past and was used to identify places.
-

Juglans regia L. (“noce”)

1. “A San Lorenzo la noce prende il senso”.

Ruta chalepensis L. (“ruta”, “u fetente”)

1. The same story for *Ruta graveolens* L. is reported in the Cilento National Park (Salerno and Guarrera, 2008).

Vitis vinifera L. s.l. (“uva”)

1. “A San Martino ogni fusto diventa vino”. This rhyme is mentioned also in Amalfi (1890), for the same area, among many others.
-

Games

Species used in a game are 6 and are reported in Tab 3.14 (see ATT. 3.14) along with the plant part used, the specific past or present use and the number of citation for each use, while the description of the game is reported below (the vernacular name of the species is between brackets).

Avena barbata Potter ex Link (“mangialacerte”, “chiappalacerte”)

1. The stem was used to prepare a kind of lasso with which capture lizards.

Ceratonia siliqua L. (“carrube”, “sciuscelle”)

1. Seeds were used to play “tombola”.

Hordeum murinum L. subsp *leporinum* (Link) Arcang. (“pascone”, “erba dei cani”)

1. The ears of these plants were thrown to children as they may get caught in t-shirts and sweaters. A similar use is reported in Piemonte (Sella, 1992; Guarrera, 2006a).

Lagurus ovatus L. s.l.

1. Two spikes were twisted in order to make a kind of moustache.

Silene vulgaris (Moench) Garcke subsp *tenoreana* (Colla) Soldano & F. Conti (“scuppietti”, “scupparielli”)

1. The puffed flower is bursted on the forehead of children as a joke. The same use is reported in the Marche region (Taffetani, 2005), in Piemonte (Sella, 1992; Guarrera, 2006a) and in Sardinia (Atzei, 2003).

Symphytum bulbosum K. F. Schimper (“sugamele”)

1. The flower is sucked as a childish game. A similar use but for *Symphytum tuberosum* L. is mentioned in Piemonte (Sella, 1992; Guarrera, 2006a).
-

3.7 DIFFUSION OF ETHNOBOTANICAL TRADITIONAL KNOWLEDGE IN AMALFI COAST

During the field survey three different methods in gathering data were used. The differences among them had no influence on the ethnobotanical data *in se* but may affect the elaborations on the diffusion of TK. Data gathered using the first method (Type 1) and data gathered during the first part of the interviews carried out with the third method (Type 3) are essentially the same. Moreover, these data can be used for assessing the diffusion of TK, while the other data may somehow be influenced by the choice of plant gathered by the interviewer. The information gathered showing plant to the informants (the second method, Type 2, and the second part of interviews of Type 3) were, on the other hand, useful to assess the erosion of TK. Accordingly, in the elaboration of data concerning the *diffusion* were used only the proper data.

It is worth to mention that the third method was useful for both kind of elaborations and furthermore, it was the more efficient: an average of 12,9 plants were mentioned for each interview, while for the first and second methods were mentioned an average of 8,4 and 11,6 plants respectively.

Traditional Knowledge is still diffused in Amalfi Coast: the Ethnobotanicity Index (Porteres, 1970) for Amalfi Coast is 18,4. Actually to make a comparison of quantitative ethnobotanical data gathered in other areas is difficult because of the various methods and strategies applied in the data collection. Considering only some studies, where all kind of use categories were collected (as in this research) it was possible to outline a certain variability of the Ethnobotanicity Index which ranged from about 13 (Pantelleria, Galt and Galt, 1978; upper Molise region, Guarrera *et al.*, 2009), to 23,7 in Montecovino Rovella, Campania (De Natale and Pollio, 2007). In other countries were also registered various values: in different area of Spain the value of this Index ranges from 8,8 to 29,1 (Agelet and Valles, 2001), pretty high values were reported also in Tunisia (27,7) (Agelet and Valles, 2001) and in the Palestinian Mountains, Israel (27) (Ali-Shtayeh *et al.*, 2000). However, considering the high number of elements that could affect this value (geographical position, local economy, isolation, type of flora, inclusion of cultivated or not of cultivated and/or toxic plants, etc.) it is not possible to critically evaluate this Index, but this consideration is in line with a spreading awareness of the lack and need of a more shared methodology.

Within the study area it has been outlined a *different* distribution of traditional knowledge considering:

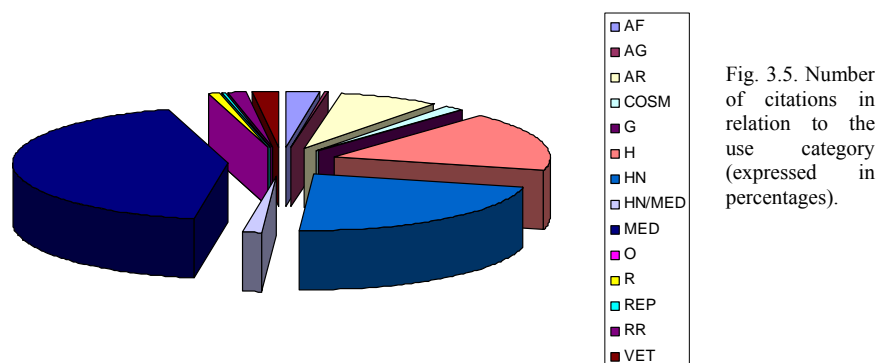
Age of informants - (for this elaboration were used only data gathered through interviews of Type 1 and partially of Type 3). Traditional knowledge has a different distribution according to the age of informants (Tab. 3.15), and in particular, younger generations seems to retain less information on ethnobotanical plants. Moreover, TK is not limited solely to the eldest generation, but spans to the mid-aged subset which moreover seems to retain the

higher quantity of information. Thus, ethnobotanical knowledge is not directly related to age, in the sense that it do not increase with the age and, consequently, experience (this same trend has been observed also in Tuscany Ansaldo and Tomei, 1997). Even though, the highest number of plant cited by one single informant is 52 (by an 85 years old retired farmer). The general trend however may be due to different factors, among which the lack of memory and negative correlations with famine period of the past may be the most important. Anyway, the worrying output of this elaboration is the low ethnobotanical knowledge of the younger generations, which may be due to an interruption of the transmission of this knowledge through generations.

Age range	Average of citation
20-40	6,8
40-60	9,7
Over 60	8,6
Average of the area	8,4

Tab. 3.15. Average number of citation considering the age of informants.

Use category – (for this elaboration were used only data gathered through interviews of Type 1 and partially of Type 3). The most cited uses are the medicinal ones (44%) (Fig. 3.5), followed by the mentions on food plants (23%), while the less common uses are concern plant used as repellent, for rituals or games. It is worth to mention that uses related to agriculture were mainly considered in the handicraft category as plants were used to make tools, even if used in rural activities.



Use category in relation to gender of informants - (for this elaboration were used only data Type 1 and partially Type 3). It has been outlined also a different distribution of ethnobotanical knowledge between genders, in relation to the use categories. Specifically, medicinal uses were mainly cited by women (Fig 3.6), while men have a wider knowledge of handicraft and domestic uses (Fig. 3.7), which, instead, are scarcely known among women. Men also have certain

knowledge of medicinal and food plants: these last ones, along with the aromatic species, are almost equally cited by the two genders.

Cosmetic uses also seem to be related to the gender factor: even they are not many have been reported almost exclusively by women. They use medicinal plants more frequently than men as it has been observed in Lucania (Pieroni and Quave, 2005) and in Morocco (Jouad *et al.*, 2001; Hamdani, 1984; El Beghdadi, 1991; Jaouad, 1992; Nabih, 1992; Ziyat *et al.*, 1997). Moreover, the role of women as prominent practitioners of herbal medicine has been outlined in many cultures (Hardy, 2000). Finally, in one of the most important medicinal text of the “Scuola Medica Salernitana” local women are often cited as authors of many remedies reported therein (Apolito, 1989).

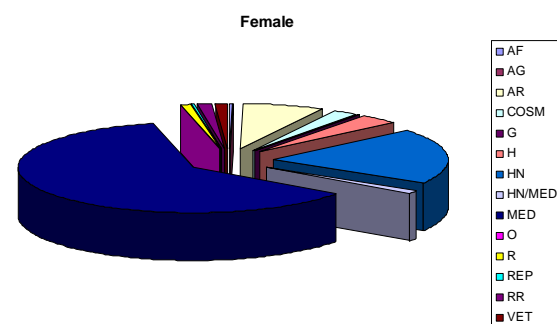


Fig. 3.6. Number of citations made by women in relation to the use category (in percentages).

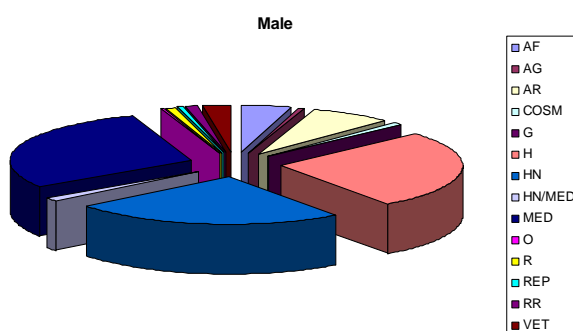


Fig. 3.7. Number of citations made by men in relation to the use category (in percentages).

Present, disappearing and obsolete uses - According to De Natale *et al.* (2009) the plants still used (as medicinal and food, veterinary, domestic or ceremonial purposes) are only 70 in the whole Campania region. In Amalfi Coast, plants still gathered for ethnobotanical uses are 150; however, it is not possible to compare different researches for quantitative consideration unless field methods used are the same.

In relation to the use category, the percentage of present, disappearing and obsolete uses are compared in Tab. 3.16. Many plants are still used at home or during work activities, other are no more used, but the remembrance of many practices is still popular among the elderly population. Thus, some uses were only practiced in the past: the informant may recall the use but refer that it is obsolete.

In Amalfi Coast 464 different uses are still present among population, 104 uses are probably disappearing (reported by some informants as a present use and by others as a use of the past), while 199 uses are referred only to the past. Among the obsolete uses it is possible to cite the use of *Ampelodesmos mauritanicus* for ropes and mats, *Agave americana* to obtain yarn used to sew sacks or the use of different plants to cure helminthiasis. These plants will be the next ones to be forgotten by the local population and thus they will disappear from the *corpus* of the immaterial cultural heritage of Amalfi Coast.

Tab. 3.16. Present, disappearing and obsolete status of the use category of plants in Amalfi Coast.

Use category	Present	Disappearing	Obsolete	Total
Medicinal	62%	15%	23%	100%
Food	73%	6%	21%	100%
Aromatic	98%	0%	2%	100%
Handicraft	40%	18%	42%	100%
Handicraft-marine	21%	31%	48%	100%
Animal feeding	70%	22%	8%	100%
Repellent	80%	0%	20%	100%
Veterinary	41%	11%	48%	100%
Ornamental	100%	0%	0%	100%
Cosmetic	50%	25%	25%	100%
Ritual	50%	0%	50%	100%
Games	0%	17%	83%	100%
Stories	75%	0%	25%	100%

In order to evaluate the erosion of the ethnobotanical knowledge, some interviews were conducted using fresh sample of plants, during or at the end, of the interview (for this elaboration were used only data Type 2 and partially Type 3). This procedure was useful to assess the botanical and ethnobotanical knowledge of informants. In particular, it has been outlined that: plants may have a use (in the present or in the past) and a vernacular name (51 uses); plants may be recognized and identified by a vernacular name but no use could be associated to the plant (98 species); plants may be recognized and the informant is aware that it has no use or could not remember the use (6 species). The naming of plants generally implies that some information is related to them, the fact that the name is preserved but not the use, may be an evidence of the lost of the ethnobotanical use. The fact that some plants (76 species) identified by a vernacular name effectively have an ethnobotanical use (reported by other informants) seems to support this theory. Whereas it was not possible to identify

a possible use of a certain number of plants (22 species): the related ethnobotanical knowledge is probably lost forever (these plants were not considered for quantitative elaborations, since they do not have the respective ethnobotanical information).

The most cited plants - (for this elaboration were used only data Type 1 and partially Type 3). According to Turner (1998) "the more widely or intensively a plant is used, the greater is its cultural significance" (De Natale *et al.*, 2009).

One key issue relating to studies on quantitative ethnobotany is the relative importance of plant taxa to different human groups by elaborating indices of cultural significance or use values for plants (Tardio and Pardo-de Santayana, 2008). In Tab. 3.17 are reported the cultural importance indexes for medicinal, food and domestic uses (Pardo de Santayana *et al.*, 2007) for the first ten highly cited plants.

The most cited plant is *Foeniculum vulgare*, maybe because is widely used both for medicinal and food/aromatic purposes.

Tab. 3.17. The most cited plants with the relative cultural importance index for the medicinal, food and domestic use categories.

Species	Number of citations	Cultural Importance Index as medicinal plant	Cultural Importance Index as food (including seasoning)	Cultural Importance Index for domestic uses (including maritime uses)
<i>Foeniculum vulgare</i> Miller	102	0,35	0,19	0,01
<i>Castanea sativa</i> Miller	101	0,00	0,09	0,43
<i>Laurus nobilis</i> L.	98	0,39	0,12	0,03
<i>Citrus limon</i> (L.) Burm.	82	0,30	0,14	0,02
<i>Matricaria chamomilla</i> L.	66	0,38	0,00	0,00
<i>Ficus carica</i> L.	49	0,18	0,03	0,01
<i>Ceratonia siliqua</i> L.	48	0,19	0,03	0,03
<i>Parietaria</i> sp. pl.	31	0,14	0,01	0,00
<i>Juglans regia</i> L.	28	0,01	0,09	0,03
<i>Quercus ilex</i> L.	28	0,01	0,01	0,10

Plants with the higher number of uses – (for this elaboration were used all data). The plants with the higher number of different uses are *Citrus limon* and *Castanea sativa*. Each part of the lemon plant may be used: leaves (to aromatize cheese and as solvent) the fruit, juice and peels, (as disinfectant for bleeding wounds, as digestive, in decoction for abdominal pain and as repellent for mosquitoes), the wood for the “*falanghe*” (pieces of wood, covered with greasy

matter, used to facilitate the dragging of ships on the beach). The *Castanea sativa* plant is used mainly for its seeds and wood. Chestnuts are boiled and used in many ways as food (often are seasoned with bay leaves). Its trunks and branches are used as stakes in vineyards and for vegetables, its wood is used for barrels, wooden beam floors and door and window frames, ships parts. The bark is used to weave baskets (which are generally used to carry lemons), leaves and branches are used to feed cows.

Average citation number in each municipality – (for this elaboration were used all data). In order to quantify the Traditional Knowledge on a geographical basis it has been calculated the average number of citations *per* informant in each municipality investigated. The outputs of this elaboration it is reported in Tab. 3.18 (see ATT. 3.15) and their correlation with the percentage of woodland surface is reported in Fig. 3.8 (see ATT. 3.15). The correlation is not so strong, whereas, the variety of habitat may affect the ethnobotanical knowledge: in Positano, where it has been outlined the highest average of citations, there are different kind of woods and different habitats, along with a pretty wide cultivated surface.

Uses specific within a certain area of Amalfi Coast – (Species mentioned by at least two different informants were used for this kind of elaboration. Moreover, plants mentioned during interviews Type 2 and during the second part of interviews Type 3 were not considered since informants may be influenced by plants showed during interviews). This analysis has not outlined consistent differences in the distribution of ethnobotanical plants in the territory, whereas it has been observed that some species (*Laurus nobilis*, *Foeniculum vulgare*, *Ficus carica*) have been mentioned in all, or almost all, municipalities of the area. Only few uses seems to be related to the ecology of the species: as for example the use of *Capparis spinosa* mentioned only in coastal municipality and in the lower village of Scala, as well as *Crithmum maritimum*, while *Alnus cordata* has been cited only in Ravello and Agerola, municipalities developed mainly on hills and mountains. On the other hand, some uses may not be related to the ecology of the species but rather to tradition: *Chamaerops humilis* grows wild only in Capo d'Orso (Maiori) but it is used exclusively in Conca dei Marini, because its leaves are weaved for a specific traditional use of this town. Another example may be *Chelidonium majus*, used exclusively in Agerola, but which grows also elsewhere. The *Agave americana*, which grows wild along the coast, is mentioned only in Conca dei Marini, Positano and Praiano, maybe because it was used to sew sacks used to transport carobs, of which Conca was an important producer, or because the coastal belt is warmer and more drier toward the end of the peninsula. Some plants typical of high altitude, as for example *Fagus sylvatica*, were also cited along the coast, because it is used to build some parts of ships. Finally, it may be useless to look for a correlation between use

category or kind of use and municipality (within the same municipality it is possible to reach altitudes higher than 1000 m above sea level, ranging from a thermophilous wood to a beech wood).

Uses in common with other Italian regions – Many uses are shared with other Italian regions, while many other common uses seems to be less diffused as they are not perceived as traditional ones but are part of the everyday routine. It is worth to outline that in other Italian regions may be used sister taxa (as for example *Ruta chalepensis* and *Ruta graveolens*) as to confirm that in each area people develop a use of the available species (Chiovenda-Bensi, 1960). The use of sister taxa, especially as medicinal plants, is often proved by a similar composition in phytochemicals responsible of the curative effect (Maccioni *et al.*, 1999).

Ethnobotanical uses are shared mainly with other close regions of the South, as for example Lucania (84 shared uses) but also with insular regions (Sicily, more than 100 shared uses; Sardinia, 63 shared uses), maybe due to the fact that communications were easier by sea than by land.

Unique uses – Many uses seems to be unique or typical of Amalfi Coast, with a prevalence of handicraft and other less common use categories. This is probably due to the fact that ethnobotanical researches mainly focus on food and medicinal plants. Among the typical uses it may be included the practice of cultivate artichokes with a clay bowl on the top of the flower in order to keep the tips of squamas turned inside, or the use of *Ceratonia siliqua* wood to make the transverse frames of ships. *Amaranthus retroflexus* seems to be used only in another area in Campania, but in a different way (De Natale and Pollio, 2007).

3.7.1 ETHNOBOTANY OF AMALFI COAST AND ITS RELATIONSHIP WITH OTHER PLANT USES IN THE MEDITERRANEAN

One of first documents found in the Mediterranean and reporting medicinal recipes (including many plants) is the Ebers papyrus, from Egypt, which dates back to 1552 B.C. (Camarda, 2008); another secure evidence for a medicinal or ceremonial utilization of a drug plant holds a goddess figurine in Crete (1400–1200 BC) made from clay (Leonti *et al.*, 2008).

In the Mediterranean area, meeting point of three continents, many cultures have interacted for millennia, being bound by the same history stream. On the other hand, the notion of a *common* cultural heritage in the Mediterranean ethnobotany and folk knowledge is not true: instead we have a very variegated and composite Mediterranean culture, which is the product of a very complex system of exchanges and relationships (Pieroni *et al.*, 2006). For example, considering food plants, ethnobotanical research has identified nearly 2.300 different plant and fungi taxa, which are gathered and consumed in the Mediterranean. Among these, over 1000 are only consumed in one single zone, while on the other hand, only few taxa (around 30 species) are consumed in most of the Mediterranean countries (Rivera *et al.*, 2006). However, the finding of this research outlined that some species are used throughout the Mediterranean basin as for example *Rosmarinus officinalis*, *Olea europaea*, *Portulaca oleracea*, *Laurus nobilis*, etc. as an evidence of old relationships or of a residual shared knowledge.

Unfortunately, it was not possible to find researches in some countries, and moreover, the number of researches, the kind and quality of data is extremely various. Many plants, indeed, have similar uses. Through the comparison of 41 ethnobotanical researches conducted in different Mediterranean countries² it has been found that some uses of Amalfi Coast are diffused also in at least another Mediterranean country. Among these uses: *Parietaria judaica* is used in Amalfi Coast to prepare a diuretic decoction and is used for the same purpose in France (Corsica) (Parc Naturel Regional de la Corse, 1985), while *Parietaria officinalis* is used in Greece (Tammaro and Xepapadakis, 1986). Some uses have some differences: as for example in Amalfi coast garlic is used as antihelminthic for animals (in a ball of fat) while in Croatia it is mixed with wine and given to horses for this affection (Vučevat-Bajt and Karlović, 1994).

Few uses, however, are common in more than one country as for example the use of *Foeniculum vulgare*, used to prepare a decoction with digestive properties in Turkey (Basgel and Erdemoglu, 2006), in Algeria and Cyprus (González-Tejero *et al.*, 2008) and in Spain (Rivera *et al.*, 2005); *Portulaca oleracea* subsp. *oleracea* which leaves are consumed raw in salads in Cyprus (Della *et al.*, 2006) and in Albania (Pieroni *et al.*, 2005a), or the use of *Laurus nobilis* as digestive in Cyprus (Della *et al.*, 2006) and in Syria (IPGRI, 2004).

² Morocco, Algeria, Tunisia, Libya, Egypt, Israel, Lebanon, Syria, Turkey, Greece, Albania, Serbia, Bosnia, Slovenia, Croatia, Italy, France, Spain, Cyprus, Malta.

3.8 THE BIOCOMPLEX MODEL: DESCRIPTION OF PHYSICAL AND ECONOMIC ELEMENTS

The importance of cultural landscapes has gradually become recognized and some policies of protection have been also developed. Some concerns cultural heritage protection and nature-conservation policies, but the main instruments should be those of agricultural policy, since the role of farming is in general crucial in these landscapes (Pinto-Correia, Vos, 2006).

In Amalfi Coast the main part of the agricultural land is developed on terraces. Terraced agriculture is a cultural tradition in many ancient civilizations around the world (Lal, 2001) and is typical of sloping lands, deeply changing the landscape of an area.

In Amalfi Coast agriculture became to decline during the 50ies and 60ies with a general reduction of cultivated land and a progressive shifting toward a tourist oriented economy followed by an increasing of urbanization (Conforti, 1991). Nowadays, agriculture in the Amalfi Coast has a secondary role in the local economy and farms have mainly a family management (76% of farms; ISTAT, 2001) and a pretty small surface [total SAU of about 1.956 ha for 4992 farms with an average SAU of 0,39 ha for each farm (ISTAT, 2001)].

Moreover, the cultivation of terraces is still practiced through a traditional farming system: many terraces are pretty isolated and their limited surface is an obstacle to the mechanization of agriculture. Frequently, products are transported on farmers' shoulders or by donkeys (Caneva *et al.*, 2007) and this factor increase costs of production (the "distance to market" factor). On the other hand, some factors could positively affect agriculture: the EU Commission, through local offices and bodies, stimulates the cultivation of land through specific funding. Farmers, moreover, may increase their incomes producing plants that have competitive advantages and especially through differentiation and focus (Porter, 1985). Differentiation may be obtained creating a unique product, for intrinsic or emotional features which may consequently have a premium price (Pratesi, 2006). Focus strategy implies that the product has a close niche of market and, in the case of Amalfi Coast it may be a product addressed to tourists visiting the area.

The decision of farmers to cultivate or not their land is based mainly on the above mentioned factors, even if a small percentage of them may have different and personal reasons (attachment to traditions or to the land, production of their own vegetables and fruit, etc.). However, it is not possible to quantify or describe them, as they are, just so, personal. This decision, anyhow, is likely to affect landscape: the abandon of terraces may have direct and indirect consequences. Wall structures, without maintenance, are more likely to fail and consequently to trigger landslides. These phenomena may be accelerated by fires as they reduce vegetation covering and affect soil conditions. Climatic conditions also affect the equilibrium of the system as drought facilitates fires and heavy rainfall may also

trigger the landslides. Moreover, vegetation plays an important role in the system: abandoned terraces usually are colonized by natural vegetation which changes the aspect of the hillsides. The colonizing vegetation, at least in its first stadium, is prone to fires, while plants growing on the walls of terraces could accelerate the collapsing process of the structures. The relationships among all these elements are simplified in Fig. 3.9 where are indicated the interacting elements in case the system is oriented toward the abandon or the maintenance of terraces.

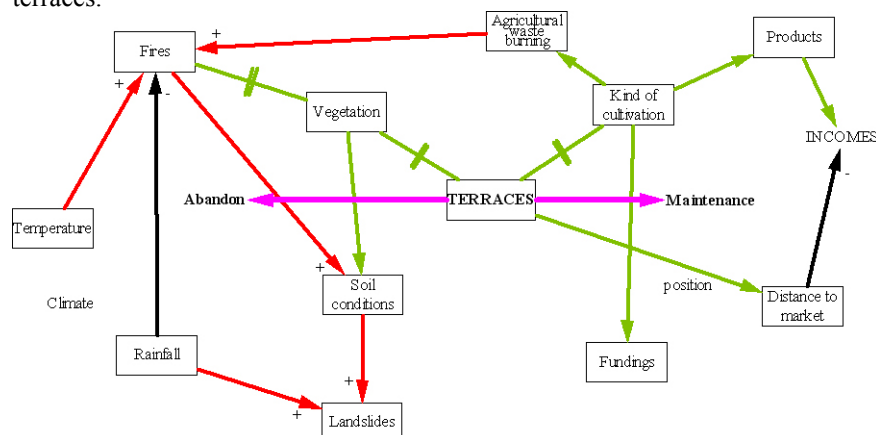


Fig. 3.9. The biocomplex model developed in Vensim® where black arrows indicate that one element may have decreasing effect on the others, red arrows indicate increasing effects. Green arrows and lines indicate variable effects with or without direction respectively.

Economic elements of the model – In this category were included all the elements that may affect the costs and the incomes rising from a cultivation. However, the production chain factor has not been evaluated (even though its structure may affect the cost of the final products) because it includes too many different elements. In fact, from a point of view of the organization of the considered sector, many components that interact along the distribution chain (transport, distribution, supply administration, marketing, etc.) are not exclusively elements of the agro-industrial production sector.

However, it is worth to mention that regional funding are provided for actions aiming at the optimization of the production chains (PIF) of the lemon “Costa d’Amalfi”, of the extra virgin olive oil “Penisola Sorrentina”, of the species of grapes used for the wine “Costa d’Amalfi” (Tramonti, Furore, Ravello) and of the gardening sector.

Manpower – Manpower is surely one of the higher costs of agricultural production and it depends on the specific cultivation. The activities of planting, maintenance and harvesting are generally carried out by men (or women). In flatland, parts of these activities are facilitated by the use of mechanized means,

while in Amalfi Coats they are essentially manual. Even though this element represents a cost within the model, it is worth to mention that agricultural production may bring economic benefit through this element, considering the employment factor.

Distance to market – This factor is relevant in Amalfi Coast, because logistics may heavily affect production costs: terraces are often far from a carriageway and transport of materials for cultivation, as well as the transport of products, has to be done by donkeys, on farmer's shoulders or using aerial ropeway and pulleys. Thus, distance have an influence both on manpower (as it is necessary more work for transport) and on the other cost category (wellness and feeding of animals, maintenance of aerial ropeways, etc.). Concerning the transport on carriage ways, the final destination (local, national or international distribution) may also affect the cost of the products.

Other costs – Other costs are due to specific needs of the cultivations: as for example the watering and manuring activities. In Amalfi Coast many terraces are integrated in a water supplying system connected to close springs, other are furnished with rainwater collection structures and ponds (Caneva *et al.*, 2007); thus, watering generally do not require high costs. On the other hand, the cost of manuring depends on the kind of cultivation and on the specific cultivation practice (monoculture, rotation, etc.). Plant-protection products are not considered intentionally among the costs, considering the intent of this research to promote the diffusion of organic farming. Further costs are due to tools, animals, equipment, transport system, etc.

Agricultural waste burning – This practice is included in the system model because it is potentially dangerous: it could cause fires both on abandoned terraces and on the surrounding natural areas. The direct effects of fires on landscape are strong, and other effects will be described afterwards. In the past the waste burning were allowed only in certain periods in order to avoid fires (Amalfi, 1890).

EU Funding- Funding for agriculture are mainly generated by the PSR, which core strategy is oriented to the integration of measures and actions aiming at the support of agriculture. In particular, the PSR 2007-2013 gives primary importance to joint projects, promotes the concentration of sources on specific strategic priorities and encourages the development of synergic effects. Many different type of funding are provided for single farmers and farms; here are described two examples of more synergic actions promoted by the PSR 2007-2013.

PIRAP – The integrated rural projects for protected areas promote and foster the realization, in agricultural areas of particular environmental value, public

integrated projects oriented to a better fruition of territory resources, to the diffusion of up-to-date technology information systems and to the prevention of natural calamities, in order to better exploit the natural and landscape resources of the territory.

In particular this action is addressed primarily to natural park agencies, and among others, with the following aims:

- improve the environmental performances of the agricultural system;
- preserve, protect and sponsor the landscape and natural resources;
- diversify the outcome sources in agriculture.

All these aims are focused on the integration of competitiveness, economic diversification, conservation and management of natural resources. Within the PIRAP other measures may be integrated, as for example the “Misura 323” addressed to the development, conservation and requalification of the agricultural resources.

In Amalfi Coast the total surface-cultivated land (SAU), within any protected area, is 664,38 ha, while the surface of uncultivated land is 152,48 ha (Tab. 3.19; see ATT. 3.16). Thus, a wide part of farms may take advantage of the actions promoted through the funding of this kind of project.

“Misura 214” for native endangered plants – This measure is focused on the protection and rescue of plant biodiversity in agriculture and of traditional regional cultivars. This action may sponsor both research institutes focused on biodiversity and agencies for actions addressed to the information of privately run firms for the valorization of regional agricultural genetic resources. In particular, the second aim of this action may be useful to promote the cultivation of typical varieties in Amalfi Coast.

Kind of cultivation – Obviously, outcomes of a farm depends also on the kind and techniques of cultivation. In fact, an organic farming rises the costs respect to a conventional farming, as well as a mechanized monoculture has different costs from a rotation or manual management. These factors are difficult to evaluate in a biocomplex model, however, in the specific case of Amalfi Coast the description of this element may become easier. In the area is possible only a not mechanized agriculture, and moreover this research is intended to promote the organic farming, or at least an integrated organic farming. Thus, within this element there are only two options: cultivate one species or two (maybe more), eventually underneath lemon orchards or vineyards.

Products – The cultivated species is a key factor in the production system. Products have been divided according to their market features, as follows:

1. products with a high economic output and with a not overstocked market;
2. products which do not have the above mentioned features but may have a premium prize for:

- objectively unique features of the product depending on its production area;
 - emotional value linked to the product.
1. An example of product of the first kind is saffron; it actually has a high economic output (its price ranged from 6 to 12 Euros *per gr.*) which may be even higher if products are certified and nicely packaged (Catorci *et al.*, 2006). The production of saffron varies in relation to the density of planting while other factors may affect the production of bulbs (Bacchi *et al.*, 2008). Reporting the results of an experimental small-scale cultivation in the Marche region, it has been calculated an economic output per ha ranging from 22.662 Euros (lower price and production) to 55.776 Euros (higher price and production) (Catorci *et al.*, 2006).
 2. Nowadays, products do not compete locally anymore, they have to face well informed consumers which have the possibility to choose: thus products, for being competitive, should have special qualities.
 - To know the provenience of a product produces a sensation of safety in the consumer and allows the creating of an emotional relationship with the product (Pratesi and Mattia, 2006). The most important product of Amalfi Coast, at least from a cultural perspective, is the lemon, and in particular the variety “Sfusato amalfitano”. This variety has unique phytochemical features, due to a higher presence of certain secondary compounds in the peel of the fruit (Poiana *et al.*, 2006). In Amalfi Coast are cultivated other products which have been recognized as traditional of the Campania region (Regione Campania, 2009), however, many of them are cultivated also in other areas within the region. Among these products it is worth to mention the “Tubbiona” apple (in Agerola), the “Limoncella” apple, one of the most valuable cultivar of apple in the South of Italy, the “Pennata” pear (Agerola), an excellent cultivar of the region, and the cherry tomatoes of Corbara.
 - Only when to the offer is linked an emotional value, which may be integrated with the specific use functions, it is possible to define a true brand (Pratesi, 2006). The imagine of the Amalfi Coast may be a successful brand, as it has been experienced by some firms, even if their products were not effectively produced in the area, or typical of Amalfi Coast. The evocative power of this area may effectively increase the appeal of a product, especially if it is addressed to tourists visiting Amalfi Coast.

Physical elements of the model

Fires - The Mediterranean-type vegetation is one of the world's major fire-prone biomes (Naveh, 1975; Bond *et al.*, 2005). In the areas in which this type of vegetation occurs, fire is a crucial process controlling vegetation dynamics and structure (Naveh 1995; Retana *et al.*, 2002; Baeza *et al.*, 2007; Capitanio & Carcaillet, 2008). A true post fire succession could not be identified, but "burnt communities tend towards a meta-stable equilibrium similar to the one which existed without fire" (Trabaud, 1987; Capitanio & Carcaillet, 2008). The fire could simplify the structure of the vegetation but could also reduce the function of patches at landscape level; it could also lower the "tampon" capacity with repercussion on the stability of slope areas and thus, reduce the resilience's capacity (Dallari *et al.*, 2006). In Amalfi Coast have been recorded 395 fires starting from 1990 to 2003 (data from the Regional Technical Provincial office for Forests in Caserta, unpublished). During this period, a total surface of 2571,58 ha has been burned down. The vegetation affected by fires was so subdivided: 178,75 ha of woods, 1236,31 ha of coppice, 963,87 ha of bushes, 157,95 ha of grassland. The 82.5 % of the fires occurred between July and September, only the 1.5% of fires occurred in June. Moreover, forest fire risk increases after terrace abandonment as fields are usually colonized by fire prone plant communities. Therefore, soil degradation processes in these landscapes can be enhanced by the combined effect of terrace collapsing and fire (Llovet *et al.*, 2006). Forest fires cause impacts on physical, chemical and microbiological soil processes and dramatically reduce plant cover (Neary *et al.*, 1999; Certini, 2005), leaving the soil surface unprotected. Furthermore, lack of vegetation cover could affect slope stability as it could increase the risk of landslide during heavy rainfall events (Koulouri and Giourgia, 2007).

Landslides – In the geological and geomorphological setting of the Sorrento Peninsula the most frequent landslides are represented by rock falls, plane and wedge slides and, more rarely, by topples (Di Crescenzo and Santo, 2007). Thus, failures are mainly located in connection with fault scarps or dip slopes with very steep bedding, resulting from decompression phenomena caused and/or fostered by deep fractures in the rock mass and often by heavy precipitation (Budetta and De Riso, 1992). The remarkable difference in permeability between pyroclasts and dolomitic basement may cause wide superficial detachments of the superficial cover, during intense rainfall events, due to the fast increase of internal pore pressure and water saturation (Lazzari, 1954; Penta *et al.*, 1954; Cinque *et al.*, 2000; Budillon *et al.*, 2005).

In the Amalfi Coast, pyroclastic deposits, often filling fractures and karst holes, could affect the sub-vertical water percolation toward the water table (which could be found almost always few hundred meters far from the land surface) (Celico *et al.*, 1986). Considering this condition, especially during heavy and uninterrupted rainfall, the substrata can not rapidly drain the water, which flow

in a sub parallel layer of the slope surface, facilitating the decollement of edaphic covering and thus the landslides (Civita *et al.*, 1975). In the research area 328 landslides were registered in the period 1963 -1998 (AVI project, 2007) (the municipality of Corbara and Sant'Egidio del Monte Albino were not included as on that mountainside there are very few terraces).

Climate (Temperature and rainfall) – In any ecological research, especially the ones regarding plants, a climatic analysis of the study area is essential (Blasi, 1994; Orsomando *et al.*, 1999) because the spatial distribution of vegetation is affected mainly by climate, even if other parameters such as pedology, exposition and biogeographical events are also important.

Thus, climate affects plants distribution so both vegetation landscape and the agriculture. Climate could also affect fires as they have a seasonal occurrence, and landslides, as they are often triggered by heavy rainfall. Climatic data (Annali idrogeologici, 1959-1999) for 30 stations in the nearby or within Amalfi Coast have been elaborated: the rainiest season is autumn for 20 stations (68.8%), while in 10 stations (31.2%) the maximum rainfall it has been registered in winter. In 24 stations the mean yearly rainfall is higher than 1000mm and among these, 9 registered rainfall amounts higher than 1400mm. The higher average monthly rainfall was calculated for Tramonti-Chiunzi with 294,5mm in November and 291,4mm in December.

Considering only the climatic stations closest to the registered fires, the average maximum temperature of June (24.9°C) is very close to the ones of September (24.7°C) but in June were recorded just few fires (1.5%) while many occurred in September (18%). The average rainfall registered in June is 34,2mm and September is 98,4mm. It is possible to assert that fires are not related to simple climatic factors, but probably in June drought is little thanks to the spring rainfall, while in September the number of fires is high despite a certain rainfall because of the summer drought, for the same reason the number of fires in August is consistently higher than in July. The above mentioned landslides were correlated with the amount of rainfall registered in the closest gauge station during the days previously the event (Fig. 3.10). Moreover, landslides mainly occurred in winter (128 events) and during fall (107 events).

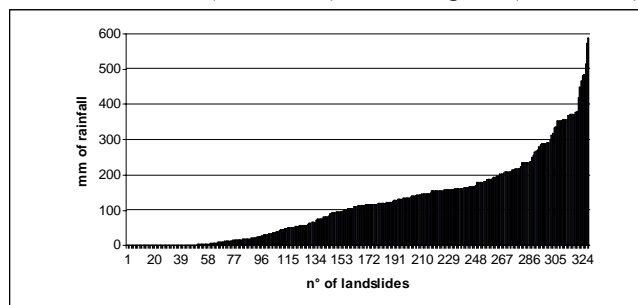


Fig. 3.10. Number of landslides in relation to the amount of rainfall.

Finally it has been calculated that the 53% of landslides occurred with an amount of rainfall of 100mm and the 65% of landslides after an amount of 50mm. Moreover, the main part of landslides occurred in the area indicated in Fig. 3.11 which roughly coincide to the rainiest area of Amalfi Coast.

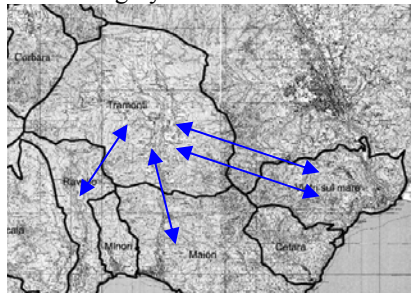


Fig. 3.11. The sector with the higher number of landslides during the period 1963-1998.

Vegetation – The vegetation cover may affect the terrace stability after abandonment. In fact, it has been observed a positive correlation between shrub vegetation on terrace walls and failure of terrace and a negative correlation between vegetation cover of the surface of terrace and its collapse (Lessechen *et al.*, 2008). Vegetation recolonization of the plain surface may reduce the failure risk, but often this is characterized by community prone to fire or which may be considered as unwelcome by farmers. In fact, vegetation on abandoned terraces is often typified by a tangled community dominated by *Rubus ulmifolius* shrubs (Cancellieri, 2008). Thus, vegetation may affect the stability of abandoned terraces damaging the walls but also creating a cover on the embankment which may reduce the runoff. This protective effect may be ruined by fire events.

Soil conditions – As stated above, forest fires cause impacts on physical, chemical and microbiological soil processes and dramatically reduce plant cover (Neary *et al.*, 1999; Certini, 2005). Moreover, abandoned terraces are vulnerable for gully erosion and piping (Lessechen *et al.*, 2008) and terraces might collapse due to lack of maintenance and consequently erosion may increase (Gallart *et al.*, 1994). The soil conditions, however, affect the system mainly through vegetation.

Land use – Land use change is influenced by a large series of interacting processes involving both the bio-physical environment and human decision making. Moreover, the feedback of changes made within the land use system on conditions influencing human livelihood may result in a change in decision-making, affecting future land use changes (Classens *et al.*, 2009). For example the perception of farmers to erosion features in a field can guide the decisions on allocation or cause abandonment (Veihe, 2000; Biielders *et al.*, 2003; Verstraeten *et al.*, 2003). The land use, however, has mainly feedback effects on the system; this factor, however, should be analyzed through an agent based modeling.

3.9 EXPERIMENTAL FIELD

The model elements could be evaluated in relation to the experimental field, and specifically:

Manpower – plants were mainly chosen according to their economic potentiality, but also for their possible few needs in cultivation practices. The main activities were manual weed eradication and watering during the summer, the planting of seeds and then of mature plants in open fields, the harvesting of saffron. All these activities required the work of one person for five days (about four hours *per day*).

Distance to market – The field is close to a road; however, products are not intended for commercialization.

Other costs – The experimental field is managed with a low watering supply in order to test the needs of the cultivated species in regime of reduction of costs. The field has not required manuring, as showed by the pedological analysis carried out therein. It was bough some manure for the saffron, but it has not been used yet, with not negative effects on the outputs of production.

Agricultural waste burning – Not contemplate. The agricultural waste has been put in a corner of the field for the compost production.

EU Funding – The cultivation of ornamental species may receive funding within the PIF action (production chain, which however has not been included in the system).

Kind of cultivation – It has been experimented both the cultivation in open field and underneath a vineyard. Good outputs of the cultivation under vineyard may indicate that it is possible to associate other plants to the already existing orchards and vineyards, and so the outcome for farmers may be increased.

Products- It should be pointed out that the production of the experimental field is not intended to any kind of commercialization.

- *products with a high economic output that are intended to a not overstocked market:* it has been planted the saffron, the harvesting is in progress, but the outputs seem pretty good.
- *products with objectively unique features depending on its production area:* many selected species are endemic, others have a limited areal, and thus they have “almost unique” features.
- *emotional value linked to the product:* many aromatic species are used in the preparation of typical dishes. Moreover, they may be packaged and sold to tourist: the appreciation for typical products is increasing as they recall in the consumer the sensation of healthy and natural products.

CHAPTER 4



4. DISCUSSION

In Amalfi Coast traditional knowledge is vast: the number of ethnobotanical species is pretty high considering other similar researches in Italy. This may be due to the frequent commercial and cultural relationships occurred in the past between Amalfi and other Mediterranean countries. On the other hand the area remained relatively isolated until not so long ago, thus traditional knowledge has been relatively preserved among local population. Even nowadays, some villages are rather isolated, not so much influenced by the booming touristic and commercial activities along the coast. Moreover, various protection measures imply constraints for the conservation of natural and cultural landscapes, avoiding an extensive urbanization and preserving a wide natural surface. The natural habitats, but also meadows close to the cultivated areas are the preferred place for gathering ethnobotanical species, even if it is worth to note that informants were not really precise in indicating this kind of data (they usually mentioned places like the nearby of their home, the surroundings, the kitchen-garden, or the mountains). However, considering the preferred habitat (according to Pignatti, 2003) of the ethnobotanical species recorded during this research, it was possible to outline a certain correspondence between these habitats and the places indicated by informants: in fact, there is a prevalence of uncultivated land and field borders; species cultivated in the kitchen garden or orchards are many, considering also that many informants reported that they had gathered the species in the mountains and then planted it in their kitchen garden, in order to make them easily available. Among the species gathered in the mountains, the aromatic species are predominant (they are also often replanted in the kitchen garden) but also many trees and tree parts, indicating that informants may have, at least roughly, a conceptual spatialization of the environment for the gathering of ethnobotanical species, as it has also been observed in Pieroni and Giusti (2002b). Thus, a preference for the most available species seems to be clear: as a further evidence, it is noteworthy to mention the use of many different species for animal feeding or the use of two different species of *Parietaria* for the same uses, which may indicate that people, at least in some cases, just gathered the closer plant which is useful for their needs.

Species have many different uses: a plant, rarely, has a unique use. In some cases, this is pretty obvious, as for example in case of species used both for human medicine and veterinary, nutraceutical plants (species consumed because retained healthy) or plants used to prepare digestive spirits. In this last case, many species are retained to have digestive properties as they are also used in decoction and to prepare herbal tea which are used to heal gastro-intestinal problems (Savo and Caneva, 2009).

Medicinal plants are considerable: it has been outlined the use of 101 species with 294 different uses. Many uses are shared with other Italian regions, but also with other Mediterranean countries. This occurrence may be probably due to the

high number of researches carried out with the focus on medicinal plants, but a certain exchange of this kind of information in the past could also be hypothesized. Many authors, indeed, suggest various influence of medical treatise on popular medicine and *vice versa* (Di Nola, 1983; Paul, 2001; Pieroni *et al.*, 2004; Leonti *et al.*, 2008; De Natale *et al.*, 2009). Considering the studied area, another point of connection was the “Scuola Medica Salernitana” since there was a close relationship between the popular and the erudite medicine through this school. Since the texts of this school were used all over Europe (Apolito, 1989) a fascinating hypothesis may be proposed: that some of the popular knowledge of Amalfi Coast was transmitted with those texts. However, how the information was conveyed from physicians to folks in other areas and what they may have retained in their own culture may not be inferred.

Traditional uses of plants are still embedded in the culture of Amalfi Coast and, above all, currently part of everyday life, showing a strong link between local people and their tradition and natural environment. Many species are ingredients of typical traditional recipes which are considered by informants very tasty, as for example: eggplants with chocolate, the “*sarchiapone*”, the “*minestra maritata*”, the “*zeppolelle*”, etc. Some traditional species (Regione Campania, 2009) are used in some preparations as for example dried figs for the “*sprucculata*” or the dried “*pere pennate*” (*Pyrus communis*) stuffed with walnuts. Some of these dishes or cakes are commercialized, other limited to a family consumption: a wider distribution of these products may sustain the maintenance of a food agro-biodiversity and increase the variety of food offered to tourists. Some initiatives have already been promoted in the area; as regards the wine production two initiatives have already been started: the Wine and Tradition Feast in Tramonti and the Wine route, a journey in the location of wine production developed through Furore, Ravello and Scala.

The production of spirits, not limited to the famous “limoncello” but very variegated in the area, it is worth to mention. The preparation of these different alcoholic beverages involves easy procedures which are generally the same, even if among family groups there may be slight modifications to the basic recipe. Moreover, it is worth to note that generally bitter food and beverages are retained digestive (Foster and Tyler, 1999), while the digestive spirits of Amalfi Coast are usually pretty sweet. Finally, many spirits used as digestive beverages are drunk as after meal, and it is a common custom to offer these spirits to guests. Sharing beverages, especially alcoholic ones, is a custom developed in all human cultures and it is associate to social occasions, the sealing of pacts and agreements, it is used to strengthen social relationships (Marshall, 1979; Savo and Caneva, 2009).

Some uses, are only referred to the past, even if the same species may be still used in different ways. Some obsolete uses are related to food shortage periods in the past (as for example the stewed pods of peas or the dried peels of

tomatoes). Thus, the decline in wild food gathering appears to be due mainly to an improvement of social-economic conditions. Lastly, it is important to consider that food preparation is mainly managed by middle-aged and elder people, thus to younger generations many uses could seem still present but this do not imply that they are able to gather wild food plants or to prepare a typical dish.

Aromatic uses are, except one, present and the plants are widely used to flavor different type of food (meat, vegetables, cakes, etc). For this reason, aromatic plants are often cultivated even if they are usually wild: many informants referred that they have gathered the plant in the mountains and then planted it in the kitchen garden.

Among these uses, a main role is played by wild fennel: this plant is widely used as medicinal and for this use its properties are pretty well known (Choi and Hwang, 2004; De Marino *et al.*, 2007; Wright *et al.*, 2007, and others). Wild fennel, as aromatic, is used to flavor almost everything and particularly sausages and salami, as in other area of South of Italy but also dried figs, pasta, cheese, olives, bread and biscuits. Surprisingly, these uses are not so common in other Italian regions. Fennel is also used to scent barrels, as well as *Laurus nobilis* and *Micromeria graeca* subsp. *graeca*. This procedure is called “*cavara*” and is one of the various domestic uses. This last category include different technological solution practiced with few tools and materials, which are disappearing, since new instruments are now easy to obtain from the market. Obviously, it will be unpractical to wash cloths using old long procedures when a washing machine may do this job in your turn and in a couple of hours. However, this knowledge is worth to be protected as well, as already stated, as it is part of a *corpus* of ideas and strategies and moreover, some traditional solutions and handicrafts are retained by local population more effective and practical than new commercial ones.

In agriculture, for example, due to the isolation of many orchards and vineyards, some practices are still present, as for example the cultivation of small trees of *Salix alba* at the edge of terraces and fields: its branches are still widely used to tie plants to stakes which are commonly of chestnut wood. *Castanea sativa* is indeed used both for pergolas in vineyards or citrus orchards and its branches are used as stakes for vegetables (as for example, tomatoes). However, some uses are obsolete: for the covering of orchards in the past were used mainly *Quercus ilex* branches, which are nowadays replaced by plastic black nets. Some handicraft may be also reinvented and intended to the souvenir market sector: as for example the kitchen spoons or tools carved in *Acer opalus* subsp. *obtusatum* wood or baskets weaved using *Castanea sativa* bark and fibers or *Olea europaea* branches and root suckers.

Plants used by sailors or connected to their activities were described separately for their particularity: mentions on this type of uses are not so common, even

though in Italy a great number of urbanized areas is developed along the coast (EUROSION, 2004). The main part of these uses are referred to the past, as nowadays fishery has become a secondary economic activity and the traditional ship building art is kept by just two or three shipwrights still working in the Amalfi Coast. Information gathered on these uses was obtained by informants who live in coastal areas (except one) and who have or had a job related to maritime activities. It is worth to outline that these data were obtained only by male informants, even if some activities, as for example the rope and nets weaving, was prevalently a female duty. Species are generally tree or shrub plants; many of them are typical of the Mediterranean belt, thus easier to find in the coastal area, even if some species are typical of the hilly and mountain belt.

In Amalfi Coast animals are still fed with wild weeds, but this activity is probably due the availability of weeds and plants in antithesis to the high costs of cultivation of hay on terraces. In fact, many of these plants are pretty common or are of easy access (on walls, in the bush wood or in meadows) and generally there are not high values of consensus. This could mean that plants are non specifically chosen for this use, excluding maybe only *Centranthus ruber* subsp. *ruber*, a plant which grows especially on the wall of villages and terraces, which has a high consensus (while its use for this purpose is rare in other areas) and *Parietaria* sp. pl. Leaves and small branches of *Quercus ilex* and *Castanea sativa* are mentioned by a good number of informants but these plants are used in many other ways, thus these materials may be also the waste of the gathering process intended to other purposes.

Plants used as repellent are few and are generally cited by a single informant. However, these uses are all present, with one exception which is also pretty curious: the applying of an oleolite of *Ruta chalepensis* on horse tails to keep away rats from gnawing them. The highly cited plant among these uses is *Ocimum basilicum* but this property is basically well known everywhere, and moreover, as all the plants included in this category, contains a pretty high concentration of essential oils (Grayer *et al.*, 1996; Verzera *et al.*, 2000; Lee *et al.*, 2005; Santos-Gomes *et al.*, 2005; Merzouki *et al.*, 2009), validating its use as repellent.

The spread of conventional pharmaceuticals products, comparatively safer and more efficacious, has probably caused the disappearance of veterinary uses as well as a decreasing of medicinal uses. This trend in Amalfi Coast may also be due to a reduction of breeding activities in the area. A certain number of uses are shared in other areas, and often the plants used to heal animals are used also for humans. Even though, probably the previous phrase could be overturned, as maybe animals were the first guinea pigs of ethnomedicine.

Cosmetic plants are only 11 and are mainly disappearing. A use, which is still widely practiced, has a ritual connection: the preparation of a scented water used to wash the face in the morning of a religious feast. A close related use was reported also in other regions and countries (Pieroni *et al.*, 2004). These uses were mainly reported by women.

Ritual uses are not so much, but very interesting, especially analyzing the similarities with other areas. The same procedure of cure the hernia passing through a trunk cut in two has been found also in the Abruzzi (De Simoni and Guarrera, 1994) and in Sicily (Napoli, 2003). Finally the trunk pieces have to be reunited symbolizing the recollection of the hernia. Finally, it is worth to note that rue, used as antihelminthic in Amalfi Coast, is widely used for magical purposes in other areas and in different ways.

Ornamental uses are few and informants just described the use of few wild species which are welcome in gardens and balconies or which branches may be collected and put in jars as decorative.

Plants related to stories or rhymes are just 4 and were mentioned by single informants, except the ones on *Ruta chalepensis* which is also known in another area of the Campania region. However, these uses are rarely reported in ethnobotanical researches thus it not possible to assess their diffusion. Finally, also game uses are probably disappearing since were reported by few informants and mainly as obsolete uses. However, all informants were adult, thus they generally mentioned their games of childhood, which is obviously past. For the same reason, it is not possible to assert the real dimension of this category.

Ethnobotanical knowledge in Amalfi Coast is still diffused and generally comparable to other Mediterranean areas and sometimes higher. However, many uses are obsolete and many are disappearing as reported by informants themselves. The most threatened category is the ones related to maritime uses, as only the 21% of uses are still practiced nowadays. Moreover, the construction of traditional “gozzi” is managed by only few shipwrights in the area and fishery has become a secondary activity in the overall economy of the Coast. Food and aromatic uses are still present, as observed in other Italian areas, while other use categories are in reduction (Guarrera and Savo, 2009).

Traditional knowledge is disappearing also among younger generations: they generally know less plants than middle-aged people and elders. Middle-aged people seems to be the best informed on ethnobotanical plants, which is surprisingly considering that elderly are generally retained the most knowledgeable informants. There may be two reasons for this trend: firstly, many people perceive the consumption of wild edible plants or the use of traditional remedies in a negative way as a symbol of poverty of the past (Pieroni *et al.*, 2005b; Ali-Shtayeh *et al.*, 2008). Secondly, the lack of memory may have

reduced their citations: including also the plants cited in interviews during which plants were showed, the number of citations is higher for elderly people (10,2) and almost comparable with the number of citations of middle-aged people (10,5 plants). The use of the methods type 2 and 3 outlined that other plants could have been used in the past: in fact, 98 species were identified with a folk name but the informants were not able to recall their use. Plants are likely to have a name if they have a use or have some other kind of properties (as for example that they are toxic for cattle): in fact 76 plants are ethnobotanical species (considering other interviews). Thus, it was possible both to infer ethnobotanical knowledge which informants are aware that is lost and the one that is completely lost.

Informants have various jobs and activities: in consideration of this element, it is worth to note that some particular uses are mainly mentioned by a certain category of informants (as for example, veterinary uses have been mentioned generally by veterinarians and by farmers; maritime uses by sailors, fishers and shipwrights). However, it is not possible to outline a close relationship between job of informants and use categories.. On the other hand, it has been highlighted a difference in the mention of use categories in general and in relation to the gender of the informant. The most cited uses are generally those related to medicinal plants, followed by food plants and domestic (handicraft) uses. The medicinal uses were reported mainly by women: in many countries, in fact, the dissemination of phytotherapeutical knowledge is prevalently matrilineal (Hardy, 2000). Moreover, women generally have a sedentary life style (the 34% of women are housewives) with less chances to have contacts outside the area in which they live (De Natale and Pollio, 2007). Food plant knowledge is more balanced among gender categories, while domestic uses are mainly practiced by men.

These three categories (medicine, food and handicraft) are also the ones where the most cited plants have the higher cultural importance indexes. *Foeniculum vulgare*, which seems to be the most important plant in the Amalfi Coast, is widely used both for medicinal and food uses. This plant is used especially in the South of Italy (Guarrera, 2006a) and in the research area is used in manifold ways. However, the two plants with the higher number of different uses are *Citrus limon* and *Castanea sativa* which may be also considered the symbols of the two spirits of the area: the mountain and the coast.

These two areas do not seem to be very different in the distribution of ethnobotanical knowledge, while it was possible to observe a certain variability in the average of citations in the municipalities of the area. It may be related to intrinsic features of the informants but may also have a certain correlation with the environmental elements. In fact, it has been observed that the municipalities, where it was registered the higher number of citations, are also typified by a high vegetation diversity and a pretty high percentage of natural surface.

Some uses, on the other hand, seem to be typical of a certain municipality of a certain area, but this distribution is mainly explained by cultural patterns rather

than to the distribution of the species in the area. In fact, commonly used plants are generally gathered in the surroundings of the house or of the village but these same plants usually do not have strict ecological needs, while for more peculiar uses people do not mind to gather plants in more relatively distant places (high mountains are pretty close to the sea due to the peculiar geomorphology of the area).

The shared knowledge in the Mediterranean may be the results of historical and cultural relationships of the past but also it may also be the result of the convergent evolution of ideas due to the fact that people asking similar questions with similar potential answers will hone in on similar solutions (McClatchey, 2005). Thus, the shared elements may be due to cultural or ecological (shared elements of the flora) reasons but it is not possible to reconstruct the way through a use was established in a certain area.

The main part of common uses is due to medicinal and food plants, as the most part of researches are focused on these plants. In the Mediterranean, however, different cultures, religions, habitats and historical contributed in the establishment of many food traditions, which have some common elements, but which are different in their regional and local customs, preferences and traditions (Nestle, 1995; Nebel *et al.*, 2006).

Finally, shared traditions and cultural diversity are both important in enriching the cultural heritage of Amalfi Coast, and both worth to be protected.

A productive process may be defined multifunctional in case it produces interconnected outputs and thus it may reach manifold goals. Some of these outputs are products which may have an economic market, while other outcomes are just of social benefit (OECD, 2001). In the last decades, there has been a steady and marked growth of interest in the contribution of farming in the supply of positive externalities. In this category of agricultural outputs, the provision of valuable landscapes appear to assume a particular connotation, especially when these are representing values linked to cultural heritage and regional identities that are threatened to disappear under current market contingencies (Cicia and Scarpa, 2003). The cultivation of the terraces in Amalfi Coast may be a multifunctional system in the sense that the practice related to agriculture implies an economic production but also the maintenance of the cultural landscape and of the hydrogeological equilibrium provided by terraces. Thus, creating profit through agriculture may affect other elements of landscape and moreover, other economical factors: the landscape is a tourist attractive as well as typical food and handicraft products. Due to strong competition in the international market, products offered by small enterprises have fewer chances to a successful commercialization. However, the tourism in the area offers a profitable opportunity for commercializing typical products. Moreover, the image of the Amalfi Coast could be used to create emotional products with a certified

provenience, which may have a premium price. The “limoncello” alcoholic beverage is a successful example of products of Amalfi Coast, but many are the possible products that could have the same destiny. Moreover, a possible production of saffron in the area has to face the competitive prices of the third countries producers, even if the saffron they offer is poorer in quality: this problem may be solved only producing products of certified quality.

In the Amalfi Coast it has been started an experimental cultivation of saffron and other native species of ornamental potential uses or aromatic and food species. This experimental cultivation of wild species may be important for various reasons: conservation and diffusion of native species, testing of cultivation procedures for wild plants (never cultivated in nursery gardening), the development of a new cultivation strategy that could be a stimulus for local stakeholders; the reutilization of abandoned terraces.

This last factor has been recognized as a key element of the landscape of Amalfi Coast: the preservation of the cultural landscape, the prevention of landslides and the contribution to the employment sector are indeed, only few positive effects, even if not quantifiable, of cultivating terraces. These factors are emerging properties of the landscape system that should be valued by stakeholders from all the productive sectors. The description of the terrace system model may be useful for considering the interacting elements and thus facilitating the creation of possible scenarios, which may be useful for planning actions.

CHAPTER 5



5. CONCLUSIONS

The essence of TK is not the mere product or use of a plant, but includes a great sum of knowledge about the local environment and its ecological rules embracing symbolism, culture and history. Nowadays, TK is disappearing in industrialized countries as a consequence of different economic trends, food and drug availability, changes in communication, culture and values. However, it is neither possible nor desirable to stop the flow of progress but TK may provide alternatives to those of modern science on different topics, especially those related to agriculture, healthcare and environmental conservation. In Amalfi Coast a rich tradition competes with modern ways of life, plants are still used by elders and middle-aged people, but it is disappearing among younger generations. Many initiatives may be promoted to foster the participation of people of different ages in order to transfer the awareness of the importance of traditional knowledge through generations, continuing its preservation in time. An example may be the organization of educative programs developed in schools, the creation of a small ethnobotanical garden or supplying a trail in the natural environment with informative signs on ethnobotanical plants.

Moreover, traditional knowledge may contribute to the shaping of a cultural landscape: in Amalfi Coast the cultivation of terraces is still performed mainly with traditional practices. However, many terraces have been abandoned in the last decades, due to a shift in economic trends in the area. In this research it has been hypothesized and described a biocomplex model with the various elements of the cultural landscape of terraces. The analysis of the relationships among these elements may be useful to understand how some actions may affect the system. Local and typical food products, but also traditional handicrafts and native peculiar plants may represent an attractive for tourists at local level or other not overstocked markets at wider level.

The cultivation of this kind of products may be promoted among local stakeholders and provide an alternative solution to the abandon of agriculture.

History and tradition, immaterial heritage, gastronomic specialties, plant remedies, ancient cultivation practices, traditional handicrafts, constitute identity factors that may contribute to the development of a territory.

Thus, the preservation of this knowledge is important as it is a cultural heritage, because part of the culture of a place and of people, because it could be used to find sustainable solution (as for example the cultivation of wild species under vineyards and lemon orchards), to economically exploit a natural resources and thus increase the incomes of local populations.

If we ignore these traditions on the assumptions that we already have all the answers we need, we will never know what more we might have learned (Hunn, 1998).

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CHAPTER 2



2. METHODS

Ethnobotany is an interdisciplinary field in that it utilizes methods from a wide array of science traditions, especially botany and anthropology (Bridges and Lau, 2006) and it encompasses aspects from a number of diverse subject areas (Edwards *et al.*, 2005). Thus, a first step in the preparation of this ethnobotanical project was to collect a wide and comprehensive bibliography on this discipline. During the first year of the PhD project a database with more than 11.000 entries on ethnobotanical works was created and made available on-line on the site of the Ethnobotany Research and Application Journal (E.R.A., 2009) as an open source in the complete version; a partial database (only a list of papers based on researches in Italy) was made available on the site of the Ethnobiology of Europe Research Network, the official site of the European Chapter of the Society for Economic Botany (Ethnobiology of Europe Research Network, 2009).

The most commonly used method to collect ethnobotanical data is to interview local people through questionnaire surveys, which was used in this research.

The field work in the Amalfi Coast was conducted in a period starting from April 2007 to September 2009 and it was divided into 11 missions divided as follow:

during the first year - 5 missions (22 days) were carried out in order to collect ethnobotanical data starting from the 19th of April to the 7th of October, 2007;

during the second year - 4 missions (20 days) in order to collect ethnobotanical data starting from the 8th of April to the 5th of September, 2008;

during the third year - 2 missions (6 days) in order to collect ethnobotanical data starting from 9th of June to 21st of September, 2009.

No special selection criteria were used in the choice of the informants because one of the aims of this work was to assess the diffusion of ethnobotanical knowledge among population (Pieroni, 2000). The interviews were carried out with people born or having lived most of their lives in Amalfi Coast. The research was carried out in the following municipalities and relative hamlets (villages): Agerola (Bomerano, Campora, Pianillo, San Lazzaro), Amalfi (Center, Pastena, Pogerola), Atrani (Center), Cetara (Center), Conca dei Marini (Center and its little sailor village), Corbara (Center), Furore (Center), Maiori (Center, Erchie, Santa Maria locality), Minori (Center), Positano (Li Parlati, Montepertuso, Nocelle), Praiano (Center), Scala (Center, Campidoglio, Minuta, Pontone), Ravello (Center, San Cosma e Damiano), Sant'Egidio del Monte Albino (Center), Tramonti (Campinola, Cesarano, Chiunzi, Figlino, Gete, Pietre, Polvica, Pucara), Vietri sul Mare (Center, Marina).

During the field work, 214 interviews were performed. The ages of the informants ranged from 21 to 94 years.

The scope of this study was explained in a preliminary way and Prior Informed Consent (Guarrera *et al.*, 2005; Pieroni *et al.*, 2005a) was requested verbally. In case it was obtained, personal data on the informants (age, job, place of

residence) and on uses of local plants (vernacular name, place and period of gathering, how and how much they use plants, part used, if they use fresh or dried plants, and if they use them with other plants, if the use is present or obsolete) were recorded through a semi-structured interview based on a preformed questionnaire³ (Fig. 2.1).

SCHEDA ETNOBOTANICA-COSTIERA AMALFITANA									
Dati scheda									
Nome intervistato									
Professione									
Comune/Frazione									
Nome scientifico									
Famiglia									
Habitat									
Status									
Freq									
Sinonimi									
Nome dialettale									
Luogo preferenziale di raccolta									
Ambiente di raccolta									
USI									
Medicina					Veterinaria				
Alimentazione Umana					Alimentazione animale				
Agricoltura					Domestico artigianali				
Cosmesi					Antiparassitari				
Aromatizzanti					Ornamentali				
Rituali religiosi					Altro				

Fig. 2.1. The questionnaire which was used for the interviews.

³ The forms for the specific uses are provided in the Attachment 2.1.

Interviews were conducted following the ISE Code of Ethics (ISE, 2006); photos were taken only after explicit consensus of the informant (Fig. 2.2).

Methods and approaches in conducting interviews found in literature are many and variegated. During this research three methods were used, which are essentially two, since the third one is the combination in sequence of the other two. The first method (Type 1) consisted in asking the informants to spontaneously quote the uses of wild plants and to indicate these plants which were then gathered and later dried. The second (Type 2) and third (Type 3) methods were slightly different: interviews were conducted showing to the informants some fresh plants, gathered by the interviewer in the surrounding area, at the same time (39) and at the end of the interviews (51), in order to figure out their knowledge about the local flora asking the vernacular name or a traditional use. The first part of the interviews (using the third method) was conducted as the interviews done with the first method. The number of interviews conducted showing the plant at the beginning should have been smaller but sometimes informants just looked at the fresh plants (because they were attending the interview of someone else and looked at the plants with them, or because they were curious about the plant bag). Data collected using the second and the third methods (in this last case only partially) were analyzed differently for quantitative analysis of the distribution of the ethnobotanical data, while were unified for the plant uses.



Fig. 2.2. An informant.

Specifically, the first part of the interview is not influenced by the showing of specific plants thus data collected during this phase have the same statistical meaning of data collected through interviews without showing plants. Moreover, the second and third methods were useful to test the ethnobotanical knowledge of informants. Specifically, the showed plants may have a use (in the present or in the past) and a vernacular name, they may be recognized and identified by a vernacular name but no use could be associated to the plant or be recognized and the informant is aware that it has no use.

Plants were collected and voucher specimens are preserved at the *Herbarium* of the Environmental Biology Dept. of the University of “Roma Tre” [URT (Holmgren and Holmgren, 1998)]. Plant species have been identified following the “Flora d’Italia” (Pignatti, 2003) and their scientific name were updated using “An Annotated Checklist of Italian Flora” (Conti *et al.*, 2005) and “Integrazioni alla Checklist della flora vascolare italiana” (Conti *et al.*, 2007). The Tropicos Database (Tropicos.org, 2009) and the IPNI Database (IPNI.org, 2009) were used instead of those texts (Conti *et al.* 2005; 2007) in case plant names were not reported therein and to check the more recent updating of plant names. Traditional uses were classified into the following categories: Animal feeding (AF), Agriculture (AG), Aromatic uses (AR), Cosmetic uses (COSM), Games (G), Handicraft (H), Human Nutrition (HN), Medicinal uses (MED), Ornamental plants (O), Little stories or rhymes on plants (R), Repellent uses (REP), Ritual or religious uses (RR), Veterinary uses (VET).

In order to analyze the ethnobotanical flora of Amalfi Coast, it was calculated the life form spectrum in order to quantify the number of each life form class (according to Pignatti, 2003) and specifically the ratio between therophytes and hemicryptophytes. This ratio may be correlated to the general climate of the area (Pirone and Ferretti, 1999) but may have also a different meaning. Moreover, it was calculated the chorological spectrum, in order to quantify the Mediterranean species and the provenience of other species (according to Pignatti, 2003). Finally, the habitat of each species (according to Pignatti, 2003) was reported in order to identify the habitats where is possible to find more ethnobotanical species.

Plants cited by a very small number (even one) of informants have been taken into account, because, particularly in European countries, they can be the last remainders of a wider knowledge of last generations, for which popular uses of plants were much more common (Agelet and Valles, 2003).

Ethnobotanical uses of Amalfi Coast were compared to other similar uses in Italian regions and Mediterranean countries in order to seek points of convergence or divergence.

The loss and extent of ethnobotanical knowledge in Amalfi Coast were evaluated through the analysis of its distribution considering the number and kind of

quotation in relation to the age and gender of informants, the actuality and number of quotation of a plant use. The distribution of uses in the territory was analyzed in order to figure out if there were some species which are used only in a village or in a sector of Amalfi Coast. Species mentioned by a unique informant and/or for a unique use were excluded for this analysis.

In order to evaluate the economic impact of some traditionally used plants it was hypothesized a biocomplex model which integrates both natural and human factors/units which interact in time and space (Pickett *et al.*, 2005). Thus, in this model both landscape elements and some marketing and economic issues are analyzed (Cicia and Scarpa, 2004; Tempesta, 2005; Pratesi and Mattia, 2006). The hypothesized biocomplex model includes 6 physical factors (fire, landslide, climate, vegetation, soil conditions, land use) and many factors related to the cultivation of plants [cost of production (distance to market, transport, manpower), public funding, successful product (premium price, impacts on tourism, awareness of the territory)] all of which interact with each other and may depend on human decisions (willingness to cultivate the land or not). The successful product may essentially be of three different kinds: a product with a not oversupplied market, a product with unique features related to the territory, intrinsic or emotional. The physical factors were briefly described and their correlation was argued. Economic elements were evaluated through:

- An hypothesis of the analysis of costs (distance to market, transport, and manpower).
- A brief analysis of national and European funding that could be used to sustain typical products of Amalfi Coast which are not competitive on the market but could be worthy to sustain.
- An evaluation of the possible factors that could make a product successful.

The analysis was applied to a concrete project: the first ethnobotanical surveys, in fact, were useful to select some native species which were chosen for starting their cultivation in an experimental field (project promoted by University of “Roma Tre” and the “Comunità Montana Penisola Amalfitana”).

ATTACHMENT 1.1.

Tab.1.1. Averages of monthly and yearly rainfall (mm) amounts (between 1959 and 1999) registered at the gauge stations in the Amalfi Coast and surrounding areas (partially modified from Savo *et al.*, 2007).

Gauge Stations	RAINFALL												R yearly mm
	R Jan mm	R Feb mm	R Mar mm	R Apr mm	R May mm	R June mm	R July mm	R Aug mm	R Sept mm	R Oct mm	R Nov mm	R Dec mm	
Nocera inferiore	144,6	120,0	109,0	94,4	66,6	37,9	27,1	47,6	85,8	147,2	209,4	177,9	1267,5
Scafati	94,2	73,7	71,8	69,8	47,4	31,4	21,8	39,2	74,8	111,1	136,7	123,7	895,6
Gragnano	193,4	149,9	131,1	116,5	64,2	33,2	22,9	44,6	88,4	148,2	215,6	232,1	1440,1
Castellammare di Stabia	135,8	103,9	96,0	91,9	56,9	27,2	18,7	36,7	80,7	120,6	162,3	163,8	1094,5
Piano di Sorrento (S. Pietro)	119,7	92,7	90,2	76,5	46,6	27,1	18,6	39,9	75,9	112,4	159,0	150,3	1008,9
Piano di Sorrento (Casa d'Ardia)	124,5	96,7	95,1	78,7	50,7	28,1	18,3	39,6	86,4	130,2	171,1	155,8	1075,2
Piano di Sorrento (Istituto nautico)	129,0	97,4	97,0	85,1	45,3	26,4	16,5	35,5	80,3	112,5	161,2	162,1	1048,3
Sorrento	86,9	77,3	61,7	71,8	32,6	28,8	14,7	17,9	99,4	152,1	182,2	104,6	930,0
Massalubrense (Fraz. Turro)	126,3	88,5	88,7	76,3	45,2	21,9	18,5	47,7	75,5	133,5	156,2	152,4	1030,7
Massalubrense (Fraz. Nerano)	104,9	87,0	80,6	75,6	49,0	22,7	19,3	47,3	63,9	131,0	143,6	135,1	960,0
Positano	163,7	134,5	131,6	114,0	70,0	39,4	21,7	51,9	106,2	153,5	208,0	212,3	1406,8
Agerola Pianillo	127,0	108,1	104,6	88,4	59,0	31,1	19,6	28,9	70,2	137,9	152,5	158,5	1085,8
Agerola San Lazzaro	202,7	136,9	128,3	96,4	55,3	36,6	37,2	36,2	88,4	151,5	223,7	257,6	1450,8
Amalfi (Ente Turismo)	205,3	156,5	166,4	105,0	68,7	52,7	32,6	49,3	101,9	164,6	210,1	274,4	1587,5
Ravello	120,1	93,8	88,4	79,7	60,5	23,3	9,3	40,7	82,7	144,7	158,2	136,5	1037,9
Scala (Pontone)	91,2	85,6	90,7	107,0	52,7	36,2	23,1	24,0	80,3	176,2	203,7	130,8	1101,5
Minori	185,9	156,6	152,5	92,6	66,2	32,6	19,7	53,4	102,8	165,8	205,8	212,2	1446,1
Maiori	164,8	132,6	132,3	96,3	65,7	26,4	13,9	44,3	79,9	136,5	181,8	155,0	1229,5
Tramonti - Chiunzi	209,2	166,5	160,1	145,9	90,2	47,1	27,7	48,1	122,4	200,2	294,5	291,4	1803,3
Tramonti - Salzano	231,2	196,1	145,9	100,7	72,2	44,1	19,1	48,4	116,7	164,7	262,7	231,9	1633,7
Cetara	206,7	118,5	128,1	100,8	48,0	43,4	32,1	37,2	98,5	149,8	170,7	240,8	1374,6
Cava dei Tirreni	171,3	161,5	157,6	133,7	70,8	33,2	22,9	46,6	107,1	192,1	263,1	226,4	1586,3
Cava dei Tirreni (Badia)	194,2	183,3	156,4	133,8	86,9	43,2	19,1	47,8	105,9	222,6	245,0	259,7	1697,9
Salerno G.civile	133,1	114,6	117,4	96,3	59,0	36,9	23,1	40,7	109,2	154,9	178,3	172,6	1236,1
Salerno Contrada Pastena	138,5	110,9	106,0	89,7	54,8	39,1	20,0	41,6	105,3	140,6	166,8	165,4	1178,7
Pontecagnano	109,5	98,5	94,7	74,2	41,8	26,0	19,0	36,1	68,0	136,3	159,7	149,6	1013,4
Battipaglia	136,1	114,6	113,0	82,9	56,8	33,3	21,2	40,5	77,3	142,1	156,9	169,4	1144,1
Capri (Aer. Militare)	58,5	48,7	44,6	42,3	27,9	15,1	10,0	31,3	45,3	70,9	86,6	83,0	564,2

ATTACHMENT 1.2

Tab.1.3. Habitat listed in the Council Directive 92/43/EEC and their localization in SIC/ZPS in the Amalfi Coast. * Priority Habitat.

Habitat Code	Habitat	SIC e ZPS
1240	Vegetated sea cliffs of the Mediterranean coasts with endemic <i>Limonium</i> spp.	IT8050009 (IT8050054)
5210	Arborescent matorral with <i>Juniperus</i> spp.	-
5330	Thermo-Mediterranean and pre-desert scrub * 32.22 - Tree-spurge formations * 32.24 - Palmetto brush * 32.23 - Diss-dominated garigues	IT8030008 IT8050009 (IT8050054) IT8050051 IT8050045
6210 6210*	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites)	IT8030008
6220*	Pseudo-steppe with grasses and annuals of the <i>Thero-Brachypodietea</i>	IT8030008 IT8050009 (IT8050054) IT8050051
7220*	Petrifying springs with tufa formation (<i>Cratoneurion</i>)	IT8030008 IT8050045
8210	Calcareous rocky slopes with chasmophytic vegetation	IT8030008
9210*	Apennine beech forests with <i>Taxus</i> and <i>Ilex</i>	IT8030008
9260	<i>Castanea sativa</i> woods	IT8030008
9340	<i>Quercus ilex</i> and <i>Q. rotundifolia</i> forests	IT8030008 IT8050009 (IT8050054) IT8050051 IT8050045

Tab.1.4. Total surface of cultivated and uncultivated land within or not in a protected area in the Amalfi Coast (ISTAT, 2001).

Municipality	Surface of cultivated land (ha)	Surface of cultivated land within a protected area (ha)	Surface of uncultivated land (ha)	Surface of uncultivated land within a protected area (ha)
Agerola	326.92	0.68	3.18	0
Amalfi	93.56	91.86	56.28	55.28
Atrani	2.41	2.41	0	0
Cetara	40.75	0	4.43	0
Conca dei Marini	19.41	19.38	6.81	6.77
Corbara	79.91	0	9.17	0
Furore	28.23	27.68	11.26	10.93
Maiori	96.55	96.04	7.37	6.75
Minori	72.03	69.99	9.95	9.95
Positano	127.87	126.55	18.78	18.15
Praiano	55.95	55.35	33.77	33.63
Ravello	141.5	139.68	11.83	7.28
Sant'Egidio del Monte Albino	249.21	0.20	1.07	0
Scala	154.39	32.42	27.49	0.94
Tramonti	392.76	0	105.23	0
Vietri sul mare	74.87	2.13	37.34	2.80
Total of the study area	1956,32	664,38	343,96	152,48

[illegible]

ATTACHMENT 3.1

Tab. 3.1. Ethnobotanical species of Amalfi Coast with their life and chorological form.

SPECIES	STATUS	LIFE FORM	CHOROLOGY
<i>Acer opalus</i> Mill. subsp. <i>obtusatum</i> (Waldst. & Kit. Ex Willd.) Gams	Wild	P SCAP (P CAESP)	ENDEM.
<i>Achillea ligustica</i> All.	Wild	H SCAP	W-STENOMEDIT.
<i>Adiantum capillus-veneris</i> L.	Wild	G RHIZ	PANTROP.
<i>Agave americana</i> L.	Wild and cultivated	P CAESP	NORDAMER.
<i>Allium cepa</i> L.	Cultivated		
<i>Allium sativum</i> L.	Cultivated		
<i>Alnus cordata</i> (Loisel.) Loisel.	Wild	P SCAP	ENDEM.
<i>Aloe vera</i> (L.) Burm. f.	Cultivated		
<i>Aloysia triphylla</i> Royle	Cultivated		
<i>Amaranthus retroflexus</i> L.	Wild	T SCAP	NORTH AMER. BECOME COSMOPOL.
<i>Ampelodesmos mauritanicus</i> (Poir.) T. Durand et Schinz	Wild	H CAESP	SW-STENOMEDIT.
<i>Antirrhinum siculum</i> Miller	Wild	CH FRUT	ENDEM.
<i>Apium graveolens</i> L.	Cultivated		
<i>Arbutus unedo</i> L.	Wild	P CAESP	STENOMEDIT.
<i>Arrhenatherum elatius</i> (L.) Beauv. ex J. et C. Presl s.l.	Wild	H CAESP	PALEOTEMP.
<i>Artemisia arborescens</i> L.	Wild	NP/ P CAESP	S-MEDIT.
<i>Asparagus acutifolius</i> L.	Wild	G RHIZ/NP	STENOMEDIT.
<i>Avena barbata</i> Potter ex Link	Wild	T SCAP	EUROMEDIT.-TURAN.
<i>Balsamita major</i> Desf.	Cultivated		
<i>Bituminaria bitumosa</i> (L.) C.H. Stirt.	Wild	H SCAP	EUROMEDIT.
<i>Borago officinalis</i> L.	Wild	T SCAP	EUROMEDIT.
<i>Brachypodium phoenicoides</i> (L.) Beauv. ex Roemer et Schultes	Wild	H CAESP	W-STENOMEDIT.
<i>Brachypodium retusum</i> (Pers.) P. Beauv.	Wild	H CAESP	W-STENOMEDIT.
<i>Brassica fruticulosa</i> Cirillo subsp. <i>fruticulosa</i>	Wild	H SCAP/CH SUFFR	CENTRAL W-STENOMEDIT.
<i>Brassica oleracea</i> L. s.l.	Wild and cultivated	CH SUFFR	
<i>Brassica rapa</i> L.	Cultivated		
<i>Calamintha nepeta</i> (L.) Savi s.l.	Wild	H SCAP (CH SUFFR)	MEDIT.-MONT. (EURO-)
<i>Calystegia silvatica</i> (Kit. in Schrad) Griseb.	Wild	H SCAND	SE-EUROP.
<i>Campanula dichotoma</i> L.	Wild	T SCAP	W-STENOMEDIT.

<i>Campanula fragilis</i> Cyr. subsp. <i>fragilis</i>	Wild	CH SUFFR	ENDEM.
<i>Capparis spinosa</i> L. s.l.	Wild	NP	EURASIAT. (SUBTROP.)
<i>Capsicum annuum</i> L.	Cultivated		
<i>Carlina corymbosa</i> L.	Wild	H SCAP	STENOMEDIT.
<i>Castanea sativa</i> Miller	Wild and cultivated	P SCAP	SE-EUROP.
<i>Centaurea cineraria</i> L. subsp. <i>cineraria</i>	Wild	CH SUFFR/H SCAP	ENDEM.
<i>Centranthus ruber</i> (L.) DC. subsp. <i>ruber</i>	Wild	CH SUFFR	STENOMEDIT.
<i>Ceratonia siliqua</i> L.	Wild and cultivated	P CAESP/P SCAP	S-MEDIT.
<i>Ceterach officinarum</i> Willd. subsp. <i>officinarum</i>	Wild	H ROS	EURAS.-TEMPER.
<i>Chamaerops humilis</i> L.	Wild and cultivated	NP/P SCAP	W-STENOMEDIT.
<i>Chelidonium majus</i> L.	Wild	H SCAP	EURASIAT. BECOME CIRCUMBOR.
<i>Chenopodium album</i> L.	Wild	T SCAP	SUBCOSMOP.
<i>Cichorium intybus</i> L.	Wild	H SCAP	COSMOPOL.
<i>Cistus creticus</i> L. subsp. <i>eriocephalus</i> (Viv.) Greuter & Bourdet	Wild	NP	STENOMEDIT.
<i>Citrus limon</i> (L.) Burm.	Cultivated		
<i>Citrus nobilis</i> Lour.	Cultivated		
<i>Citrus sinensis</i> (L.) Osbeck	Cultivated		
<i>Clematis vitalba</i> L.	Wild	P LIAN	EUROP.-CAUCAS.
<i>Coffea arabica</i> L.			
<i>Corylus avellana</i> L.	Wild and cultivated	P CAESP	EUROP.-CAUCAS.
<i>Crithmum maritimum</i> L.	Wild	CH SUFFR	EUROMEDIT.
<i>Cucumis sativus</i> L.	Cultivated		
<i>Cucurbita pepo</i> L.	Cultivated		
<i>Cynara cardunculus</i> L. var. <i>scolymus</i> (L.) Benth	Cultivated		
<i>Cynodon dactylon</i> (L.) Pers.	Wild	G RHIZ/H REPT	TERMO-COSMOPOL.
<i>Cytisus spinescens</i> C. Presl	Wild	CH SUFFR	SUBENDEM. (ITALIAN-DALMAT.)
<i>Dactylis glomerata</i> L. s.l.	Wild	H CAESP	PALEOTEMP.
<i>Daucus carota</i> L. s.l.	Wild	H BIENNE (T SCAP)	PALEOTEMP. (BECOME SUBCOSMOPOL.)
<i>Diospyros kaki</i> Thunb.	Cultivated		
<i>Diplotaxis tenuifolia</i> (L.) DC.	Wild and cultivated	H SCAP	SUBMEDIT-SUBATLANT.
<i>Emerus major</i> Mill. s.l.	Wild	NP	CENTRAL-EUROP. (?)
<i>Equisetum</i> sp.			

<i>Erica arborea</i> L.	Wild	P CAESP (NP)	STENOMEDIT.
<i>Eucalyptus globulus</i> Labill.	Cultivated		
<i>Euphorbia dendroides</i> L.	Wild	NP/P SCAP	STENOMEDIT- MACARONES
<i>Fagus sylvatica</i> L.	Wild	P SCAP	CENTRAL-EUROP.
<i>Ferula communis</i> L.	Wild	H SCAP	S-MEDIT. (EURO-)
<i>Ficus carica</i> L.	Wild and cultivated	P SCAP	MEDIT.-TURAN.
<i>Foeniculum vulgare</i> Miller	Wild	H SCAP	S-MEDIT.
<i>Fragaria vesca</i> L. subsp. <i>vesca</i>	Wild	H REPT	EUROSIB. BECOME COSMOPOL.
<i>Fraxinus ornus</i> L. subsp. <i>ornus</i>	Wild	P SCAP	EURO-N-MEDIT. - PONTICO
<i>Fumaria officinalis</i> L. subsp. <i>officinalis</i>	Wild	T SCAP	PALEOTEMP. BECOME SUBCOSMOP.
<i>Galium lucidum</i> All. s.l.	Wild	H SCAP	EUROMEDIT.
<i>Glaucium flavum</i> Crantz	Wild	H SCAP	EUROMEDIT.
<i>Gossypium</i> sp.			
<i>Hedera helix</i> L. subsp. <i>helix</i>	Wild	P LIAN	SUBMEDIT-SUBATL.
<i>Helianthus annuus</i> L.	Cultivated		
<i>Helichrysum italicum</i> G. Don. fil. subsp. <i>italicum</i>	Wild	CH SUFFR	S-EUROP.
<i>Hordeum murinum</i> L. subsp. <i>leporinum</i> (Link) Arcang.	Wild	T SCAP	EUROMEDIT.
<i>Hordeum vulgare</i> L.	Cultivated		
<i>Hypericum perforatum</i> L.	Wild	H SCAP	PALEOTEMP. BECOME SUBCOSMOP.
<i>Juglans regia</i> L.	Cultivated		
<i>Juniperus communis</i> L.	Wild	P CAESP (P SCAP)	CIRCUMBOR.
<i>Lactuca sativa</i> L.	Cultivated		
<i>Lactuca serriola</i> L.	Wild	H BIENNE/T SCAP.	EUROMEDIT.-SUDSIB.
<i>Lagenaria siceraria</i> (Molina) Standl.	Cultivated		
<i>Lagurus ovatus</i> L. s.l.	Wild	T SCAP	EUROMEDIT.
<i>Laurus nobilis</i> L.	Wild and cultivated	P CAESP (P SCAP)	STENOMEDIT.
<i>Lavandula angustifolia</i> Mill. subsp. <i>angustifolia</i>	Cultivated		
<i>Lavatera</i> sp.			
<i>Lepidium graminifolium</i> L. subsp. <i>graminifolium</i>	Wild	H SCAP	EUROMEDIT.
<i>Linum usitatissimum</i> L.	Cultivated		
<i>Lobularia maritima</i> (L.) Desv. subsp. <i>maritima</i>	Wild	H SCAP/CH SUFFR	STENOMEDIT.
<i>Malus pumila</i> Mill.	Cultivated		

<i>Malva cretica</i> Cav. S.l.	Wild	T SCAP	STENOMEDIT.
<i>Malva neglecta</i> Wallr.	Wild	T SCAP	PALEOTEMP.
<i>Malva sylvestris</i> L. subsp. <i>sylvestris</i>	Wild	H SCAP (T SCAP)	EUROSIB. BECOME SUBCOSMOP.
<i>Matricaria chamomilla</i> L.	Wild and cultivated	T SCAP	SE-ASIAT. (?) BECOME SUBCOSMOP.
<i>Melissa officinalis</i> L. subsp. <i>altissima</i> Arcangeli	Wild and cultivated	H SCAP	W-ASIAT. BECOME EURO-MEDIT.
<i>Mentha aquatica</i> L. subsp. <i>aquatica</i>	Wild and cultivated	H SCAP	PALEOTEMP. BECOME SUBCOSMOP.
<i>Mentha spicata</i> L.	Wild and cultivated	H SCAP	EUROMEDIT.
<i>Mentha x piperita</i> L.	Cultivated		
<i>Mercurialis annua</i> L.	Wild	T SCAP	PALEOTEMP.
<i>Mespilus germanica</i> L.	Wild and cultivated	P CAESP/P SCAP	S-EUROP.-PONTINE (?)
<i>Micromeria graeca</i> Benth. subsp. <i>graeca</i>	Wild	CH SUFFR	STENOMEDIT.
<i>Morus alba</i> L.	Cultivated		
<i>Muscari comosum</i> (L.) Mill.	Wild	G BULB	EUROMEDIT.
<i>Myrtus communis</i> L. subsp. <i>communis</i>	Wild	P CAESP	STENOMEDIT.
<i>Ocimum basilicum</i> L.	Cultivated		
<i>Olea europaea</i> L.	Wild and cultivated	P CAESP/P SCAP	STENOMEDIT.
<i>Opuntia ficus-indica</i> (L.) Miller	Wild	P SUCC	NEOTROP.
<i>Origanum majorana</i> L.	Cultivated		
<i>Origanum vulgare</i> L. subsp. <i>viridulum</i> Nyman	Wild and cultivated	H SCAP	SE-MEDIT. (STENO-)
<i>Ostrya carpinifolia</i> Scop.	Wild	P CAESP/P SCAP	CIRCUMBOR.
<i>Papaver rhoeas</i> L.	Wild	T SCAP	E-MEDIT.
<i>Parietaria judaica</i> L.	Wild	H SCAP	EUROMEDIT.-MACARON.
<i>Parietaria officinalis</i> L.	Wild	H SCAP	CENTRAL EUROP - W.ASIAT.
<i>Petroselinum crispum</i> (Mill.) Fuss	Cultivated		
<i>Phaseolus vulgaris</i> L.	Cultivated		
<i>Picris hieracioides</i> L.	Wild	H SCAP/H BIENNE	EUROSIB.
<i>Pimpinella anisum</i> L.	Cultivated		
<i>Pinus pinea</i> L.	Wild and cultivated	P SCAP	EUROMEDIT.
<i>Pistacia lentiscus</i> L.	Wild	P CAESP (P SCAP)	S-MEDIT.-MACARONES.
<i>Pisum sativum</i> L.	Cultivated		
<i>Plantago lanceolata</i> L.	Wild	H ROS	EURASIAT. BECOME COSMOP.

<i>Plantago major</i> L. subsp. <i>major</i>	Wild	H ROS	EURASIAT. BECOME SUBCOSMOP.
<i>Polygonum aviculare</i> L. s.l.	Wild and cultivated	T REPT	COSMOPOL.
<i>Polystichum setiferum</i> (Forsskal) T. Moore ex Woynar	Wild	G RHIZ/H ROS	CIRCUMBOR.
<i>Portulaca oleracea</i> L. subsp. <i>oleracea</i>	Wild	T SCAP	SUBCOSMOP.
<i>Prunus armeniaca</i> L.	Cultivated		
<i>Prunus avium</i> L.	Cultivated		
<i>Prunus cerasus</i> L.	Cultivated		
<i>Prunus domestica</i> L.	Cultivated		
<i>Pteridium aquilinum</i> (L.) Kuhn subsp. <i>aquilinum</i>	Wild	G RHIZ	COSMOPOL.
<i>Punica granatum</i> L.	Cultivated		
<i>Pyrus communis</i> L.	Cultivated		
<i>Quercus ilex</i> L.	Wild	P SCAP (P CAESP)	STENOMEDIT.
<i>Quercus pubescens</i> Willd. subsp. <i>pubescens</i>	Wild	P CAESP/P SCAP	SE-EUROP. (SUBPONTICA)
<i>Reichardia picroides</i> Roth	Wild	H SCAP	STENOMEDIT.
<i>Rhamnus alaternus</i> L.	Wild	P CAESP	STENOMEDIT.
<i>Rosa canina</i> L.	Wild	NP	PALEOTEMP.
<i>Rosmarinus officinalis</i> L.	Wild	NP	STENOMEDIT.
<i>Rubus ulmifolius</i> Schott	Wild	NP	EUROMEDIT.
<i>Ruscus aculeatus</i> L.	Wild	G RHIZ/CH FRUT	EUROMEDIT.
<i>Ruta chalepensis</i> L.	Wild	CH SUFFR	S-MEDIT.
<i>Salix alba</i> L.	Wild and cultivated	P SCAP	PALEOTEMP.
<i>Salvia officinalis</i> L.	Cultivated		
<i>Sambucus nigra</i> L.	Wild	P CAESP	EUROP.-CAUCAS.
<i>Sanguisorba minor</i> Scop. subsp. <i>balearica</i> (Bourg. Ex Nyman) Munoz Garm. & C. Navarro	Wild	H SCAP	PALEOTEMP. BECOME SUBCOSMOP.
<i>Santolina neapolitana</i> Jordan et Fourr.	Wild	NP	ENDEM.
<i>Saponaria officinalis</i> L.	Wild	H SCAP	EUROSIB.
<i>Satureja montana</i> L. s.l.	Wild	CH SUFFR	OROF.-W-MEDIT.
<i>Silene vulgaris</i> (Moench) Garcke subsp. <i>tenoreana</i> (Colla) Soldano & F. Conti	Wild	H SCAP	E-MEDIT
<i>Smilax aspera</i> L.	Wild	NP (G RHIZ)	PALEOSUBTROP.
<i>Solanum lycopersicum</i> L.	Cultivated		
<i>Solanum melongena</i> L.	Cultivated		
<i>Solanum tuberosum</i> L.	Cultivated		

<i>Sonchus asper</i> (L.) Hill subsp. <i>asper</i>	Wild	T SCAP/H BIENNE	EUROSIB. DIVENUTO SUBCOSM.
<i>Sonchus oleraceus</i> L.	Wild	T SCAP (H BIENNE)	EUROSIB. DIVENUTO SUBCOSM.
<i>Sonchus tenerrimus</i> L.	Wild	T SCAP/H SCAP	STENOMEDIT.
<i>Sorbus domestica</i> L.	Wild and cultivated	P SCAP	EUROMEDIT.
<i>Spartium junceum</i> L.	Wild	P CAESP	EUROMEDIT.
<i>Symphytum bulbosum</i> K. F. Schimper	Wild	G RHIZ	SE-EUROP.
<i>Taraxacum officinale</i> F.H. Wigg.	Wild	H ROS	CIRCUMBOR.
<i>Teucrium chamaedrys</i> L. s.l.	Wild	CH SUFFR	EUROMEDIT.
<i>Thymelaea tartonraira</i> (L.) All. subsp. <i>tartonraira</i>	Wild	NP/CH SUFFR	STENOMEDIT.
<i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i>	Wild and cultivated	CH REPT (CH SUFFR)	EUROMEDIT.
<i>Thymus striatus</i> Vahl	Wild and cultivated	CH REPT	SE-EUROP.
<i>Tilia platyphyllos</i> Scop. s.l.	Wild	P SCAP (P CAESP)	EUROP.-CAUCAS.
<i>Triticum aestivum</i> L.	Cultivated		
<i>Triticum dicoccoides</i> (Korn) Korn ex Schweinf.	Cultivated		
<i>Ulmus minor</i> Miller s.l.	Wild	P CAESP/P SCAP	EUROP.-CAUCAS.
<i>Umbilicus horizontalis</i> DC.	Wild	G BULB	STENOMEDIT.
<i>Urospermum dalechampii</i> Scop.	Wild	H SCAP	EUROMEDIT. CENTRO-OCCID.
<i>Urtica membranacea</i> Poiret ex Savigny	Wild	T SCAP	S-MEDIT.
<i>Urtica urens</i> L.	Wild	T SCAP	SUBCOSMOP.
<i>Vicia faba</i> L.	Cultivated		
<i>Viscum album</i> L.	Wild	P EP	EURASIAT.
<i>Vitis vinifera</i> L. s.l.	Wild and cultivated	P LIAN	UNKNOWN ORIGIN
<i>Zea mays</i> L.	Cultivated		

Plant family distribution

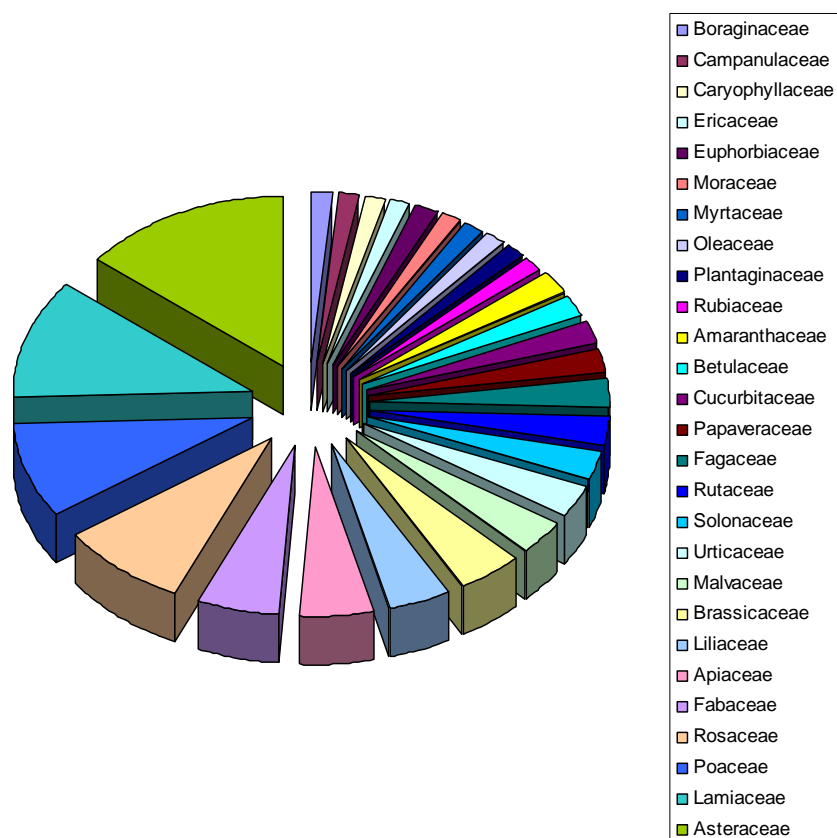


Fig. 3.1 Plant family distribution of the ethnobotanical species of Amalfi Coast.

ATTACHMENT 3.3

Tab. 3.2. List of species (and their plant parts) still or no more used as medicine along with their specific uses and related number of citations.

Species	Plant part used	Use	Number of citation	Obsolete use (O) or present use (P)
<i>Achillea ligustica</i> All.	Floral tops	Knee joint pain	1	P
	Floral tops	Helminthiasis	1	O
	Floral tops	Cough	1	O
<i>Adiantum capillus-veneris</i> L.	Fronds	Depurative after childbirth	3	O
	Fronds	Abortive	2	O
	Fronds	To increase milk production	1	P
	Fronds	Cough, stomach pain	1	P
<i>Agave americana</i> L.	Lymph	Burns	1	P
<i>Allium cepa</i> L.	Bulb	Cold and sore throat	2	P
	Bulb	Burns	1	P
	Bulb	Insect bites	1	P
<i>Allium sativum</i> L.	Bulb	Helminthiasis	9	O
	Bulb	Blood pressure	2	P
	Bulb	Infections	1	P
	Bulb	Insect bites	1	P
<i>Aloe vera</i> (L.) Burm. f.	Extract	To make babies stop to suck their mothers' milk	1	O
	Plant	Skin protection	1	P
<i>Aloysia triphylla</i> Royle	Leaves	Abdominal pain ⁴	2	P
	Leaves	Clean teeth	1	O
<i>Amaranthus retroflexus</i> L.	Root	Cough	1	P
<i>Artemisia arborescens</i> L.	Leaves	Digestive and anti-inflammatory	1	P
<i>Borago officinalis</i> L.	Roots	Cough	4	P
	Roots	Abdominal pain	1	P
	Flowers	Depurative	1	P
	Leaves	Depurative	1	P
<i>Brassica oleracea</i> L. s.l.	Leaves	Hematomas	1	P
<i>Calamintha nepeta</i> (L.) Savi s.l.	Leaves, Branches	Toothache, caries	3	P(O)
	Leaves, Branches	Helminthiasis	2	O
	Leaves	Cold, Cough	2	O
	Leaves	Abdominal pain	2	O
	Leaves	Joint pain	1	P

⁴ In Amalfi Coast it has been noted, but the same fact occurs in other countries (Akerreta *et al.*, 2007a), that there is some confusion between the stomach and the intestines, since everything in the abdomen is considered to be the same thing. As a result, stomach or intestinal pains sometimes have similar remedies.

	Branches	Sedative	1	P
<i>Calystegia silvatica</i> (Kit. in Schrad) Griseb.	Leaves	Resolvent, pimples	3	P(O)
<i>Campanula fragilis</i> Cyr. subsp <i>fragilis</i>	Plant	Medicinal purposes	1	O
<i>Carlina corymbosa</i> L.	Root	Intestinal inflammation	1	O
<i>Centranthus ruber</i> (L.) DC. subsp <i>ruber</i>	Floral tops	Relaxant	2	O
	Floral tops	Constipation	1	O
<i>Ceratonía siliqua</i> L.	Fruit	Cold, cough, bronchitis	29	P(O)
	Fruit	Abdominal pain	14	P(O)
	Fruit	Diarrhea	3	P(O)
	Fruit	Warts	2	P
	Fruit	Digestive	1	P
<i>Ceterach officinarum</i> Willd. subsp <i>officinarum</i>	Fronds	Cough	1	P
<i>Chelidonium majus</i> L.	Sap	Warts	2	P
	Plants	Liver problems	1	P
<i>Citrus limon</i> (L.) Burm.	Juice of fruit	Wounds	15	P(O)
	Peel of fruit	Cold and cough	14	P(O)
	Peels of fruit	Abdominal pain	11	P
	Peel of fruit	Digestive	11	P
	Juice	Digestive, depurative, refreshing	6	P
	Slice of fruit	Headache, fever	5	P(O)
	Leaves	Resolvent	3	O
	Peels	Stomachache	2	O
	Juice	Liver depurative	2	O
	Juice of fruit	Headache	1	P
	Peels	Toothache	1	P
	Juice	Against cholesterol	1	P
	Juice	Diarrhea	1	P
	Juice	Disinfectant	1	P
	Mould ⁵	Wounds	1	O
	Juice	Swollen tonsils	1	O
<i>Citrus nobilis</i> Lour.	Peels	Digestive	5	P
	Peels	Cough	1	P
<i>Citrus sinensis</i> (L.) Osbeck	Peels	Cough, Cold	5	P
	Peels	Abdominal pain	2	P(O)
	Flowers	Sedative	1	P
	Peels	Digestive	1	P
<i>Coffea arabica</i> L.	Beans	Abortive	1	O
<i>Crithmum maritimum</i> L.	Plant	Whooping cough	1	O
	Plant	Pain	1	O
<i>Cynodon dactylon</i> (L.) Pers.	Roots	Depurative, refreshing	3	O
	Plant	Kidney stones	2	P
	Roots	Liver problems	2	P
	Roots	Cough	1	P
	Plant	Headache	1	P
	Roots	Abdominal pain	1	O
	Plant	Lack of appetite	1	O

⁵ The mould that grows on lemon fruits.

<i>Diplotaxis tenuifolia</i> (L.) DC.	Plant	Aphrodisiac	1	P
	Plant	Abdominal pain	1	O
<i>Equisetum</i> sp	Plant	Draining, skin aging	1	P
<i>Eucalyptus globulus</i> Labill.	Bark	Cough	1	O
<i>Euphorbia dendroides</i> L.	Latex	Warts	1	P
<i>Ficus carica</i> L.	Fruits	Cold, Cough	31	P(O)
	Fruits	Abdominal pain	8	P(O)
	Sap	Warts	2	P
	Sap	Insect bites	1	P
	Fruit	Digestive, refreshing	1	P
<i>Foeniculum vulgare</i> Miller	Each plant part	Abdominal pain	31	P(O)
	Fruits, floral tops	Cold, Cough	29	P(O)
	Fruits	Digestive problems	16	P(O)
	Fruits, floral tops	Digestive, appetizer	15	P
	Root	Refreshing	2	P
	Whole plant	Refreshing	1	P
	Fruits	Cough	1	O
	Floral tops	Helminthiasis	1	O
<i>Fragaria vesca</i> L. subsp <i>vesca</i>	Roots	Cough	1	P
<i>Fraxinus ornus</i> L. subsp <i>ornus</i>	Bark	Depurative, refreshing, abdominal pain	3	P(O)
	Bark	Blood pressure	1	O
	Bark	Throat disinfectant	1	P
<i>Galium lucidum</i> All. s.l.	Plant	Dislocations	1	O
<i>Hordeum vulgare</i> L.	Seeds	Cough	5	P(O)
<i>Hypericum perforatum</i> L.	Plant	Cough	2	P
	Plant	Warts	1	P
	Plant	Pimples	1	O
<i>Juglans regia</i> L.	Husks	Digestive	15	P
	Kernels	Cough	1	P
<i>Lactuca sativa</i> L.	Leaves	Toothache, dental abscesses	7	P(O)
	Leaves	Dental abscesses, infections	7	O
	Leaves	Laxative	1	P
<i>Lactuca serriola</i> L.	Leaves	Digestive problems	1	P
<i>Laurus nobilis</i> L.	Leaves	Abdominal pain, weakness	44	P(O)
	Leaves	Cold, Cough	34	P(O)
	Leaves	Digestive problems	9	P(O)
	Leaves	Digestive	7	P
	Leaves	Gastritis	1	P
	Leaves	Stomach problems	1	P
	Leaves	Joint pains	1	P
<i>Lavatera</i> sp.	Leaves	Resolvent	1	O
	Plant	Cough	1	O
<i>Lepidium graminifolium</i> L. subsp <i>graminifolium</i>	Stems	Cough	1	P

<i>Linum usitatissimum</i> L.	Seeds	Wounds	3	P
	Seeds	Bronchitis	2	P(O)
<i>Lobularia maritima</i> (L.) Desv. subsp <i>maritima</i>	Flowers	Cold, Cough	3	P(O)
	Plant	Abdominal pain	1	P
<i>Malus pumila</i> Mill.	Fruit, peels of the fruit	Cough	10	P(O)
	Fruit, peels of the fruit	Stomach and abdominal pain	3	P(O)
	Fruit	Kidney problems	1	P
	Peel of fruit	Diarrhea	1	P
	Fruit	Cough	1	O
<i>Malva</i> sp pl. (<i>Malva cretica</i> Cav. s.l., <i>Malva neglecta</i> Wallr., <i>Malva sylvestris</i> L. subsp <i>sylvestris</i>)	Roots	Cough, cold, asthma, bronchitis, throat ache	15	P(O)
	Roots	Refreshing	11	P(O)
	Roots	Abdominal pain	3	P
	Roots	Diuretic, cystitis	1	P
	Leaves	Depurative	1	P
	Plant	Headache	1	P
	Plant	Dislocations	1	P
	Roots	Kidney problems	1	P
	Roots	Sedative	1	P
<i>Matricaria chamomilla</i> L.	Floral tops	Abdominal and stomach pains, colitis	28	P(O)
	Floral tops	Cold, cough	22	P(O)
	Floral tops	Sedative	8	P
	Floral tops	Abdominal pain	6	P
	Floral tops	Cough	4	P(O)
	Floral tops	Digestive	4	P(O)
	Floral tops	Eye inflammation	4	P
	Floral tops	Neuralgia and toothache	3	P
	Floral tops	Diuretic	1	P
	Floral tops	Kidney problems	1	P
	Floral tops	Muscular pain	1	P
	Whole plant	Dislocation	1	O
<i>Melissa officinalis</i> L. subsp <i>altissima</i> Arcangeli	Leaves	Sedative	2	P
<i>Mentha</i> sp pl. (<i>Mentha aquatica</i> L. subsp <i>aquatica</i> , <i>Mentha spicata</i> L., <i>Mentha x piperita</i> L.)	Leaves	Digestive	3	P
	Leaves	Sedative	1	P
	Leaves	Cough	1	P
	Leaves	Refreshing	1	P
<i>Micromeria graeca</i> Benthham subsp <i>graeca</i>	Small branches	Cough, Whooping cough	6	P
<i>Morus alba</i> L.	Fruits	Cough	1	O
<i>Muscari comosum</i> (L.) Mill.	Bulb	Hypertension	1	O
<i>Myrtus communis</i> L. subsp <i>communis</i>	Fruits	Digestive	25	P
	Shoots	Joint pain	1	P
	Fruits	Blood circulation	1	P
	Fruits	Menstrual pain	1	O
<i>Ocimum basilicum</i> L.	Leaves	Digestive	2	P
	Leaves	Digestive	1	P
	Leaves	Pimples	1	O
<i>Olea europaea</i> L.	Oil	Dislocations	4	P(O)
	Oil	Wounds	3	P

	Oil	Pimples	3	P(O)
	Oil	Muscular pain	3	P(O)
	Oil	Burns, sun rush	2	P
	Oil	Otitis	1	P
	Leaves	Abortive	1	O
<i>Opuntia ficus-indica</i> (L.) Miller	Flowers, cladodes	Cough, bronchitis, pneumonia	6	P(O)
	Flowers	Stomach pain, kidney problems	1	P
	Flowers	Sedative, refreshing	1	P
	Cladodes	Hematomas	1	O
<i>Origanum vulgare</i> L. subsp <i>viridulum</i> Nyman	Seeds	Cough	1	P
	Leaves	Cough	1	P
<i>Ostrya carpinifolia</i> Scop.	Bark	Medicinal	1	P
<i>Papaver rhoeas</i> L.	Plant	Sedative	1	O
<i>Parietaria</i> sp. pl. (<i>Parietaria judaica</i> L., <i>Parietaria officinalis</i> L.)	Whole plant	Dislocation, swelling	15	P(O)
	Whole plant	Skin irritations	6	P(O)
	Whole plant	Wounds, hematomas	5	P
	Roots	Cough	5	P(O)
	Whole plant	Joint and muscular pain	3	P(O)
	Roots	Diuretic, kidney problems	2	P
	Roots	Abdominal pain	1	P
	Whole plant	Burns	1	P
	Whole plant	Rhagas	1	P
	Whole plant	Disinfectant, tetanus	1	O
<i>Petroselinum crispum</i> (Mill.) Fuss	Leaves, plant	Abortive	3	O
	Leaves, plant	To reduce milk production	2	P
<i>Pimpinella anisum</i> L.	Seed	Digestive	3	P
<i>Pistacia lentiscus</i> L.	Buds	Join pain (through inhalation)	1	P
<i>Plantago</i> sp. pl. (<i>Plantago major</i> L. subsp <i>major</i> , <i>Plantago lanceolata</i> L.)	Leaves	Wounds	2	O
	Plant	Cough	1	P
	Leaves	Dislocations	1	O
	Leaves	Resolvent	1	P
<i>Polygonum aviculare</i> L. s.l.	Young shoots, roots	Cough	5	P
	Roots, Plant	Diuretic, kidney problems	3	P
	Roots, Plant	Abdominal and stomach pain	3	P
	Roots, plant	Liver problems	2	P
<i>Portulaca oleracea</i> L. subsp <i>oleracea</i>	Plant	Digestive, Abdominal pain	1	P
<i>Prunus avium</i> L.	Peduncles	Cough, Cold	8	P
	Peduncles	Abdominal and stomach pain	4	P
	Peduncles	Digestive	2	P
	Peduncles	Diuretic, cellulites	1	P
	Peduncles	Kidney problems	1	P
<i>Prunus domestica</i> L.	Fruits	Cough	3	P
	Fruits	Laxative	1	P

<i>Pteridium aquilinum</i> (L.) Kuhn subsp. <i>aquilinum</i>	Fronds	Cough	1	P
<i>Punica granatum</i> L.	Juice of fruit	Prostatitis	1	O
	Peel of fruit	Diarrhea	1	P
<i>Pyrus communis</i> L.	Fruit	Cold, cough	2	P
<i>Quercus ilex</i> L.	Bark	Burns	1	P
<i>Quercus pubescens</i> Willd. subsp. <i>pubescens</i>	Bark	Inflammations, skin problems	2	P(O)
<i>Reichardia picroides</i> Roth	Roots	Cough	2	P
	Roots	Abdominal pain	2	P
	Roots	Kidney problems	1	P
<i>Rosa canina</i> L.	Leaves	Resolvent	1	O
<i>Rosmarinus officinalis</i> L.	Leaves	Cold, cough	2	P
	Leaves	Abdominal pain	2	P
	Leaves	Knee joint pain	1	P
	Shoots	Joint pain	1	P
	Leaves	Bile production	1	P
	Plant	Skin problems	1	O
	Plant	Skin problems	1	O
<i>Rubus ulmifolius</i> Schott	Shoots	Cough	2	P
	Shoots	Abdominal pain	2	O
	Leaves	Wounds	1	P
	Shoots	Refreshing, abdominal pain, bleated stomach	1	P
	Shoots	Abdominal pain	1	O
	Shoots	Abdominal pain	1	O
<i>Ruscus aculeatus</i> L.	Roots	Colitis	1	P
<i>Ruta chalepensis</i> L.	Floral tops, branches	Dislocations, joint and muscular pain	14	P(O)
	Branches	Digestive	4	P
	Plant	Pain, arthritis, rheumatisms	3	P(O)
	Plant	Helminthiasis	3	O
	Plant	Wounds, rheumatisms	2	P(O)
	Plant	Pimples	2	P(O)
	Floral tops	Otitis	1	P
	Tops, leaves	Sty	1	P
	Plant	Sun rushes, burns	1	P
	Plant	Joint pain	1	P
	Plant	Infections, tetanus	1	O
	Plant	Muscular pain	1	O
	Plant	Muscular pain	1	O
	Plant	Muscular pain	1	O
<i>Salvia officinalis</i> L.	Leaves	Cough, bronchitis	7	P
	Leaves	Stomach and abdominal pain	2	P
	Leaves	Oral disinfectant	1	P
	Leaves	Stimulate appetite	1	P
	Leaves	Diuretic	1	P
	Leaves	Diuretic	1	P
<i>Sambucus nigra</i> L.	Roots	Digestive	3	P
	Leaves	Wounds	1	O
	Branches	Abdominal pain	1	O
<i>Santolina neapolitana</i> Jordan et Fourr.	Plant	Cough	1	O
<i>Solanum lycopersicum</i> L.	Fruit	Insect bites	18	P(O)
	Fruits	Irritations	3	P

	Fruit juice	Disinfectant	1	P
	Fruit juice	Wounds	1	P
	Shoots	Hemorrhoids	1	P
	Fruit	Pimples	1	O
<i>Solanum tuberosum</i> L.	Tuber	Headache, fever	4	O
	Tuber	Burns	3	P
	Tuber	Gastritis	1	P
	Tuber	Splinters of metal in the eyes	1	O
<i>Sonchus asper</i> (L.) Hill subsp <i>asper</i>	Leaves	Stomach problems	2	P
	Plant	Refreshing	1	P
	Roots	Cough	1	P
	Leaves	Haemostatic	1	O
<i>Sonchus oleraceus</i> L.	Roots	Cough	4	P
	Roots	Abdominal pain	4	P
	Roots	Kidney problems	1	P
<i>Sonchus tenerrimus</i> L.	Roots	Cough	2	P
		Abdominal pain	1	P
<i>Spartium junceum</i> L.	Flowers	Depurative	1	P
<i>Teucrium chamaedrys</i> L. s.l.	Plant	Abdominal pain	2	P(O)
	Plant	Appetizer	1	O
<i>Thymus longicaulis</i> C. Presl subsp <i>longicaulis</i>	Leaves	Cold, cough	2	P
<i>Tilia platyphyllos</i> Scop. s.l.	Flowers, leaves	Cough, bronchitis	11	P
	Flowers	Abdominal pain	3	P
	Flowers	Sedative	2	P
	Flowers	Kidney problems	1	P
	Flowers	Headache	1	P
<i>Ulmus minor</i> Miller s.l.	Flowers	Bronchitis	1	P
	Bark	Cicatrizing	1	O
<i>Urtica</i> sp pl. (<i>Urtica urens</i> L., <i>Urtica membranacea</i> Poirlet ex Savigny)	Roots	Cough	4	P
	Roots	Abdominal pain	3	P(O)
	Leaves	Knee joint pain	1	P
	Plant	Headache	1	P
	Leaves	Refreshing for feet	1	P
	Plant	Laxative	1	P
<i>Vicia faba</i> L.	Seeds	Stomach acidity	1	P
<i>Vitis vinifera</i> L. s.l.	Wine	Cold, Cough	5	P
	Wine	Menstrual pain	1	P
	Wine	Wounds	1	P
	Buds	Eyewash	1	O

ATTACHMENT 3.4

Tab. 3.3. List of species (and their plant parts) still or no more used as food along with their specific uses and related number of citations.

Species	Plant part used	Uses	Number of citations	Obsolete use (O) or present use (P)
<i>Allium cepa</i> L.	Bulbs	“ <i>Solari</i> ” typical dish	1	P
	Bulbs	Raw with tomatoes	1	O
	Bulbs	Roasted with anchovies	1	O
<i>Allium sativum</i> L.	Bulbs	“ <i>Mevuza ripiena</i> ” typical dish	2	P
<i>Arbutus unedo</i> L.	Fruits	Eaten raw, jams	3	P
<i>Asparagus acutifolius</i> L.	Turions	Pastas, risottos	3	P
	Turions	Omelets	2	P
	Turions	Boiled or raw	2	P
<i>Borago officinalis</i> L.	Floral tops, leaves	Stockfish	3	P(O)
	Leaves	Pulses	2	P(O)
	Leaves	Fried in batter	2	P
	Leaves	Handmade green pasta	1	P
	Flowers	To stuff ravioli	1	P
<i>Brassica fruticulosa</i> Cirillo subsp <i>fruticulosa</i>	Leaves	Cooked	1	P
<i>Brassica oleracea</i> L. s.l.	Leaves	Soups	7	P(O)
	Leaves	Cooked	2	P
	Leaves	Timbale	1	P
<i>Brassica rapa</i> L.	Roots	Boiled	1	O
<i>Calamintha nepeta</i> (L.) Savi s.l.	Leaves	Spirits	1	P
<i>Capsicum annuum</i> L.	Fruits	“ <i>Mevuza ripiena</i> ” typical dish	2	P
	Fruits	Spirits	1	P
	Fruits	Boiled and put under vinegar	1	P
<i>Castanea sativa</i> Miller	Seeds	Boiled or roasted	12	P
	Seeds	Cakes	5	P
	Seeds	Eaten with jackdaw	1	P
<i>Centranthus ruber</i> (L.) DC. subsp <i>ruber</i>	Leaves	Eaten in salad or boiled	1	P
<i>Ceratonía siliqua</i> L.	Fruits	Baked	6	O
	Fruits	Spirits	1	P
	Fruits	To obtain alcohol	1	O
	Fruits	Sugar	1	O
	Fruits	Jam	1	O
<i>Chenopodium album</i> L.	Leaves	Soups	1	O
<i>Cichorium intybus</i> L.	Leaves	Boiled	1	P
<i>Citrus limon</i> (L.) Burm.	Peel of fruit	Candied fruit	2	P
	Fruits	Salads	2	P
<i>Clematis vitalba</i> L.	Young shoots	Fried in batter or cooked	2	O

<i>Corylus avellana</i> L.	Kernels	Eaten raw	1	P
<i>Cucurbita pepo</i> L.	Fruits	“ <i>zucchine alla scapece</i> ” typical dish	2	P
	Flowers	Cooked	1	P
	Fruits	Dried	1	P
	Flowers	Roasted	2	P
<i>Cynara cardunculus</i> L. var. <i>scolymus</i> (L.) Benth	Flowers	Roasted	2	P
<i>Daucus carota</i> L. s.l.	Leaves	Boiled	1	P
<i>Diospyros kaki</i> Thunb.	Fruits	Eaten raw	1	P
<i>Diplotaxis tenuifolia</i> (L.) DC.	Leaves	Salads	12	P
	Leaves	Pasta	7	P
	Leaves	To top pizza	3	P
	Leaves	Cheese	1	P
<i>Ficus carica</i> L.	Syconia	“ <i>Sprucculata</i> ” typical dessert	7	P(O)
	Syconia	Eaten raw	1	P
<i>Foeniculum vulgare</i> Miller	Leaves, fruits	Soup	6	P
	Leaves, fruits	Boiled	4	P(O)
	Leaves, plant	Fried	2	P
	Leaves	Salads	2	P
<i>Fragaria vesca</i> L. subsp <i>vesca</i>	Fruits	Eaten raw	2	P
	Fruits	Spirits	2	P
	Fruits	Handmade ice-cream	1	P
<i>Glaucium flavum</i> Crantz	Leaves	Salads	1	P
	Leaves	Omelets	1	P
<i>Helianthus annuus</i> L.	Seeds	Preserve food	1	P
<i>Hordeum vulgare</i> L.	Seeds	Bread	1	O
<i>Juglans regia</i> L.	Kernels	Eaten raw	2	P
	Kernels	To fill dried figs	2	O
	Kernels	To fill pears	1	P
	Kernels	Pasta	1	O
<i>Juniperus communis</i> L.	Juniper berry	Spirits	1	P
<i>Lactuca sativa</i> L.	Leaves	Raw in salads	2	P
<i>Lactuca serriola</i> L.	Leaves	Boiled with other greens	2	P
	Leaves	Soups	2	P
	Leaves	Raw in salads	1	P
<i>Lagenaria siceraria</i> (Molina) Standl.	Fruits	“ <i>Sarchiapone ripieno</i> ” typical dish	3	P
<i>Malva</i> sp. pl. (<i>Malva cretica</i> Cav. s.l. <i>Malva neglecta</i> Wallr. <i>Malva sylvestris</i> L. subsp <i>sylvestris</i>)	Leaves	Boiled	2	P
	Floral tops	Salads	1	P
<i>Mentha</i> sp. pl. (<i>Mentha aquatica</i> L. subsp <i>aquatica</i> , <i>Mentha spicata</i> L., <i>Mentha x piperita</i> L.)	Leaves	“ <i>Mevuza ripiena</i> ” typical dish	1	P
<i>Mespilus germanica</i> L.	Seeds	Spirits	1	P
<i>Morus alba</i> L.	Fruits	Eaten raw	2	P
	Fruits	Spirits	1	P

<i>Muscari comosum</i> (L.) Mill.	Bulbs	Eaten raw	1	P
<i>Olea europaea</i> L.	Fruits (oil)	Preserve food	4	P
	Fruits	Pickled	1	P
<i>Opuntia ficus-indica</i> (L.) Miller	Fruits	Eaten raw	3	P
<i>Parietaria</i> sp. pl. (<i>Parietaria judaica</i> L., <i>Parietaria officinalis</i> L.)	Young shoots	Salads	1	O
<i>Phaseolus vulgaris</i> L.	Seeds	Boiled	3	P
	Seeds	Stewed with vegetables	2	O
	Seeds	“Solari” typical dish	1	P
	Seeds	Pasta	1	P
	Seeds	Soup	1	O
<i>Picris hieracioides</i> L.	Leaves	Salads	1	P
<i>Pistacia lentiscus</i> L.	Fruits	Spirits	1	P
<i>Pisum sativum</i> L.	Pods	Boiled	1	O
<i>Portulaca oleracea</i> L. subsp <i>oleracea</i>	Leaves	Salads	23	P(O)
<i>Prunus armeniaca</i> L.	Seed	Spirits	1	P
<i>Prunus avium</i> L.	Fruits	Eaten raw	1	P
	Fruits	Jams	1	P
	Fruits	Spirits	1	P
<i>Prunus cerasus</i> L.	Fruits	Eaten raw	1	P
	Fruits	Jams	1	P
<i>Prunus domestica</i> L.	Fruits	Dried	1	O
<i>Punica granatum</i> L.	Fruits	Spirits	1	P
<i>Pyrus communis</i> L.	Fruits	Dried	2	P
	Fruits	Jams	1	P
<i>Quercus ilex</i> L.	Fruits	Spirits	1	P
<i>Reichardia picroides</i> Roth	Leaves	Salads	15	P
	Leaves	Boiled with beans or wild greens	6	P
	Leaves	“Minestra maritata” typical soup	6	P(O)
<i>Rosa canina</i> L.	Petals	Spirits	1	O
<i>Rubus ulmifolius</i> Schott	Fruits	Eaten raw, jams	4	P
	Fruits	Spirits	1	P
	Shoots	Omelets	1	O
<i>Sambucus nigra</i> L.	Flowers	Fritters	1	P
	Fruits	Jams	1	P
<i>Sanguisorba minor</i> Scop. subsp <i>balearica</i> (Bourg. Ex Nyman) Munoz Garm. & C. Navarro	Leaves	Salads	1	P
<i>Silene vulgaris</i> (Moench) Garcke subsp <i>tenoreana</i> (Colla) Soldano & F. Conti	Leaves	Risotto	1	P
	Leaves	Cooked	1	O
<i>Solanum lycopersicum</i> L.	Fruits	Dried and put under oil	1	P
	Fruits	Tomato sauce	1	P

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	Fruits	Eaten raw with onions	1	O
	Fruits	Dried and added to sauces	1	O
	Peels of fruit	Dried	1	O
<i>Solanum melongena</i> L.	Fruits	" <i>Melanzane con la cioccolata</i> " typical cake	6	P
	Fruits	Rissoles	1	P
	Fruits	Preserves	1	P
<i>Solanum tuberosum</i> L.	Tubers	Boiled with beans or wild greens	2	O
	Tubers	Cooked potato flour	1	P
<i>Sonchus asper</i> (L.) Hill subsp <i>asper</i>	Leaves	Salads	10	P(O)
	Leaves	" <i>Minestra maritata</i> " typical soup	6	P(O)
	Leaves	Boiled with beans	5	P
	Leaves	Cooked	3	P(O)
	Leaves	" <i>Ammesca</i> " typical soup	2	P
	Leaves	Timbale	1	P
<i>Sonchus oleraceus</i> L.	Flowers	Eaten raw	1	P
	Leaves	Boiled	1	P
	Leaves	" <i>Minestra maritata</i> " typical soup	1	P
	Leaves	Salads	1	O
<i>Sonchus tenerrimus</i> L.	Leaves	Salads	3	P
	Leaves	Cooked	2	O
	Leaves	" <i>Minestra maritata</i> " typical soup	1	P
<i>Taraxacum officinale</i> F.H. Wigg.	Leaves	Salads	1	P
	Leaves	Boiled	1	P
<i>Triticum aestivum</i> L.	Seeds	Traditional pizza	1	P
	Seeds	Typical bread	1	O
<i>Triticum dicoccoides</i> (Korn) Korn ex Schweinf.	Seeds	Soups	1	O
<i>Urtica</i> sp. pl. (<i>Urtica urens</i> L., <i>Urtica membranacea</i> Poir et ex Savigny)	Floral tops	To stuff ravioli	2	P
	Leaves	Boiled	1	P
	Leaves	Risotto	1	P
	Leaves	Handmade green pasta	1	P
	Leaves	Fritters	1	P
	Leaves	To top pizza	1	O
<i>Vicia faba</i> L.	Stems	Salads	1	O
<i>Vitis vinifera</i> L. s.l.	Fruits	" <i>Lamicado</i> " a light wine	2	P
	Fruits	Preserves	1	P
	Fruits	" <i>Acquata</i> "	1	O
<i>Zea mays</i> L.	Seeds	" <i>Sciuanelle</i> " a typical dish	3	P
	Seeds	Polenta	1	P
	Seeds	Fritters	1	P
	Seeds	Typical bread	1	O

ATTACHMENT 3.5

Tab. 3.4. List of species (and their plant parts) still or no more used as aromatic along with their specific uses and related number of citations.

Species	Plant part used	Use (flavoring)	Number of citations	Obsolete use (O) or present use (P)
<i>Allium cepa</i> L.	Bulbs	Vegetables, meat and pasta	3	P
<i>Allium sativum</i> L.	Bulbs	“maruzzelle” typical dish, pasta, vegetables	5	P
	Bulbs	“zucchini alla scapece” typical dish	2	P
	Bulbs	Eggplants	1	O
<i>Balsamita major</i> Desf.	Leaves	Used as mint	1	P
<i>Calamintha nepeta</i> (L.) Savi s.l.	Leaves	Fish, artichokes, chestnuts	3	P
<i>Capparis spinosa</i> L. s.l.	Buds	To aromatize different dishes	2	P
	Buds	Pasta	2	P
	Buds	“colatura di alici”	1	P
<i>Capsicum annuum</i> L.	Fruits	Vegetables, meat	4	P
<i>Citrus limon</i> (L.) Burm.	Leaves	Cheese	4	P
	Leaves	Rabbit, sausages	3	P
	Peel of fruit	Cakes, desserts	2	P
	Juice	“per ‘e musse” typical dish	2	P
	Juice	Fish	1	P
<i>Foeniculum vulgare</i> Miller	Fruits	Salami, sausages	11	P
	Fruits	Dried figs	5	P
	Fruits, leaves	Meat	4	P
	Fruits	Bread, biscuits	3	P
	Fruits, leaves	Soups	3	P
	Leaves	Fish	3	P
	Leaves	Pasta	2	P
	Leaves	Ricotta cheese	1	P
	Fruits	Preserves	1	P
<i>Laurus nobilis</i> L.	Leaves	Meat	8	P
	Leaves	Chestnuts, figs	8	P
	Leaves	Pork fat or blood	2	P
<i>Mentha</i> sp. pl. (<i>Mentha aquatica</i> L. subsp <i>aquatica</i> , <i>Mentha spicata</i> L. , <i>Mentha x piperita</i> L.)	Leaves	Fish	14	P
	Leaves	“zucchine alla scapece” typical dish	3	P
		Lemon salad	2	P
	Leaves	Beans, broad beans	1	P
	Leaves			
<i>Ocimum basilicum</i> L.	Leaves	Vegetables	5	P
<i>Origanum majorana</i> L.	Leaves	Meat	3	P
<i>Origanum vulgare</i> L. subsp <i>viridulum</i> Nyman	Leaves	Vegetables, meat	20	P
<i>Petroselinum crispum</i> (Mill.) Fuss	Leaves	Spleen	2	P
		Vegetables	2	P
		Snails	1	P

<i>Rosmarinus officinalis</i> L.	Leaves	Meat	23	P
	Leaves	Potatoes	6	P
	Leaves	Dried figs	3	P
<i>Salvia officinalis</i> L.	Leaves	Meat, fish	8	P
<i>Satureja montana</i> L. s.l.	Leaves	Meat	3	P
<i>Thymus</i> sp pl. (<i>Thymus longicaulis</i> C. Presl subsp <i>longicaulis</i> , <i>Thymus striatus</i> Vahl)	Leaves	Meat	5	P

ATTACHMENT 3.6

Tab. 3.5. List of species (and their plant parts) still or no more used to make handicrafts along with their specific uses and related number of citations.

Plant	Plant part used	Use	Number of citations	Obsolete use (O) or present use (P)
<i>Acer opalus</i> Mill. subsp <i>obtusatum</i> (Waldst. & Kit. Ex Willd.) Gams	Wood	Spoons, kitchen utensils	4	O
	Wood	Goat Collars	2	O
	Wood	Firewood	1	P
	Wood	Clogs	1	O
<i>Adiantum capillus-veneris</i> L.	Fronds	Decorative	4	P(O)
	Fronds	Decorative	1	P
<i>Agave americana</i> L.	Leaves fibers	Yard	3	O
<i>Alnus cordata</i> (Loisel.) Loisel.	Wood	Firewood	4	P(O)
	Wood	Fruit boxes	2	P
	Wood	Barrels	1	O
<i>Aloysia triphylla</i> Royle	Plant	Scent the laundry	1	O
	Plant	Scent linen	1	P
<i>Ampelodesmos mauritanicus</i> (Poirot) T. Durand et Schinz	Leaves	Brooms	5	O
	Leaves	Doormats, chairs	2	O
	Stems	Separate pizzas	1	O
	Plant	Fire	1	O
	Stems	Rolling shutters	1	O
<i>Arbutus unedo</i> L.	Wood	Canes	1	P
<i>Asparagus acutifolius</i> L.	Branches	Decorative	1	P
<i>Calamintha nepeta</i> (L.) Savi s.l.	Plant	Scent linen	1	O
<i>Castanea sativa</i> Miller	Trunks	Stakes for orchards and vineyards	25	P(O)
	Branches, trunk, root suckers	Stakes for vegetables	8	P
	Wood	Door and window frames	8	P(O)
	Wood	Pieces of furniture	8	P(O)
	Wood	Barrels	7	P(O)
	Wood	Baskets	6	P(O)
	Wood	Planking	5	P(O)
	Wood	Firewood	4	P(O)
	Wood	Beam floors	4	P(O)
	Branches	Handle of utensils	4	P(O)
	Wood	Fences	3	P
	Wood	Doors	2	P
	Branches	Canes	2	P
	Wood	Fruit boxes	2	O
	Fibers	Chairs	1	P
	Wood	Stairs	1	P
	Trunk	Lamppost	1	O
	Branches	Covering	1	O
	Wood	Windlass	1	O
	Root suckers	Tie up faggots	1	O
<i>Ceterach officinarum</i>	Fronds	Decorative	3	P

Willd. subsp <i>officinarum</i>				
<i>Citrus limon</i> (L.) Burm.	Wood	Handles of utensils	1	O
	Peel of fruit	Scent laundry	1	O
<i>Corylus avellana</i> L.	Shells	Fire	1	O
<i>Cynara cardunculus</i> L. var. <i>scolymus</i> (L.) Benth	Flower	Agricultural practice	1	P
<i>Cytisus spinescens</i> C. Presl	Plant	Firewood	1	O
<i>Erica arborea</i> L.	Branches	Brooms	6	P(O)
	Branches	Firewood	1	P
	Stump	Pipes	1	O
	Roots	Bowls	1	O
<i>Fagus sylvatica</i> L.	Wood	Canes	1	O
	Wood	Firewood	1	P
<i>Ficus carica</i> L.	Small branches (sap)	Rennet	1	O
<i>Foeniculum vulgare</i> Miller	Plant, fruits	Washing barrels	4	P(O)
	Plant	Commercial practice	1	O
<i>Fraxinus ornus</i> L. subsp <i>ornus</i>	Trunk, branches	Handles of utensils	3	P
	Wood	Firewood	3	P
	Wood	Clogs	1	O
	Trunk	Stakes	1	P
	Small branches	Stakes	1	P
	Wood	Chairs	1	P
	Wood	Jointer plane	1	O
<i>Juglans regia</i> L.	Wood	Furniture	3	P(O)
	Wood	Firewood	1	P
	Wood	Door and window frames	1	P
	Shells	Fire	1	O
<i>Lagurus ovatus</i> L. s.l.	Plant	Decorative	1	P
<i>Laurus nobilis</i> L.	Leaves	Scent laundry	3	O
	Leaves	Washing barrels	2	P
	Wood	Canes	1	P
	Leaves	Scent soap	1	O
	Leaves	Scent linen	1	O
	Leaves	To reduce fat in eels	1	P
<i>Lavandula angustifolia</i> Mill. subsp. <i>angustifolia</i>	Floral tops	Scent linen	6	P
<i>Micromeria graeca</i> Bentham subsp <i>graeca</i>	Plant	Washing barrels	1	O
<i>Myrtus communis</i> L. subsp <i>communis</i>	Leafy branches	Decorative	1	P
	Branches	Baskets	1	P
	Wood	Canes	1	P
<i>Olea europaea</i> L.	Branches, root- suckers	Baskets	2	P
	Wood	Kitchen utensils	1	O
	Seed	Fire	1	O
<i>Ostrya carpinifolia</i> Scop.	Wood	Kitchen utensils	2	P
	Wood	Firewood	1	P
	Wood	Tools	1	P

<i>Parietaria</i> sp. pl. (<i>Parietaria judaica</i> L., <i>Parietaria officinalis</i> L.)	Leaves	Clean windows	1	P
<i>Polystichum setiferum</i> (Forsskal) T. Moore ex Woyнар	Fronds	Covering	1	O
<i>Prunus avium</i> L.	Wood	Furniture	3	P(O)
	Wood	Clogs	1	O
<i>Pteridium aquilinum</i> (L.) Kuhn subsp. <i>aquilinum</i>	Fronds	Covering	1	P
	Fronds	Covering	1	O
<i>Quercus ilex</i> L.	Wood	Firewood, charcoal	13	P(O)
	Branches	Covering	6	P(O)
	Plant	Decorative	1	P
<i>Quercus pubescens</i> Willd. subsp <i>pubescens</i>	Wood	Firewood	2	P
	Wood	Tables	1	P
	Wood	Barrels	1	O
<i>Ruscus aculeatus</i> L.	Plant	Keep away rats	3	P(O)
	Plant	Brooms	1	O
<i>Salix alba</i> L.	Branches	Twines	20	P(O)
	Branches	Baskets	4	P(O)
	Branches	Chairs	1	P
	Branches	To wean calves	1	P
	Wood	Clogs	1	O
<i>Sambucus nigra</i> L.	Wood	Canes	1	P
	Juice of fruit	Ink	1	O
	Fruits	Hunting	1	O
<i>Saponaria officinalis</i> L.	Plant	Laundry	1	O
<i>Sorbus domestica</i> L.	Wood	Firewood	1	P
	Wood	Clogs	1	O
<i>Spartium junceum</i> L.	Branches	Twines	6	P(O)
	Plant	Brooms	2	O
<i>Thymelaea tartonraira</i> (L.) All. subsp <i>tartonraira</i>	Plant	Brooms	1	O
<i>Thymus longicaulis</i> C. Presl subsp <i>longicaulis</i>	Plant	Scent barrels	1	O
<i>Vitis vinifera</i> L. s.l.	Plant	Agricultural practice	1	P
	Wine	Agricultural practice	1	P

ATTACHMENT 3.7

Tab. 3.6. List of species (and their plant parts) still or no more used by sailors along with their specific uses and related number of citations.

Species	Plant part	Uses	Number of citations	Obsolete use (O) or present use (P)
<i>Ampelodesmos mauritanicus</i> (Poiret) T. Durand et Schinz	Leaves	Ropes to sustain fish nets, mooring ropes	4	O
<i>Castanea sativa</i> Miller	Bark, Wood	‘Coffe’ (baskets)	2	P (O)
	Wood	Upperworks	2	O
<i>Ceratonia siliqua</i> L.	Wood	Transverse frames of ships	6	P (O)
<i>Citrus limon</i> (L.) Burm. f.	Wood	‘Falanghe’ ⁶	2	P(O)
<i>Citrus sinensis</i> (L.) Osbeck	Wood	‘Falanghe’	1	O
<i>Fagus sylvatica</i> L.	Wood	Oar blades	1	O
<i>Fraxinus ornus</i> L. subsp. <i>ornus</i>	Wood	Oar housing, upperworks	4	P(O)
	Wood	Masts	1	O
<i>Gossypium</i> sp.	Fibers	Nets	4	O
	Fibers	Caulking	1	O
	Fibers	Fishing	1	O
<i>Linum usitatissimum</i> L.	Oil	Color	1	P
<i>Morus alba</i> L.	Wood	Transverse frames, upperworks	2	P(O)
<i>Myrtus communis</i> L. subsp. <i>communis</i>	Branches	Creels	3	O
<i>Olea europaea</i> L.	Branches, root suckers	Creels	3	O
	Wood	‘Falanghe’	1	P
<i>Opuntia ficus-indica</i> (L.) Miller	Cladodes	Make ships faster	1	O
<i>Pinus pinea</i> L.	Wood	Planking	5	P(O)
	Bark	Color for dyeing nets	1	O
<i>Pistacia lentiscus</i> L.	Branches	Creels	1	O
<i>Quercus ilex</i> L.	Wood	Transverse frames, keels	3	P(O)
	Wood	‘Falanghe’	1	P
<i>Quercus pubescens</i> Willd. subsp. <i>pubescens</i>	Wood	Transverse frames, keels	4	P(O)
	Wood	‘Falanghe’	1	P
<i>Salix alba</i> L.	Branches	Creels	1	O
<i>Sorbus domestica</i> L.	Wood	Keels	2	P(O)
	Wood	‘Falanghe’	1	P
<i>Ulmus minor</i> Miller s.l.	Wood	Transverse frames of ships, upperworks	1	P

⁶ *Falanghe*- pieces of wood, covered with greasy matter, used to facilitate the dragging of ships on the beach.

ATTACHMENT 3.8

Tab. 3.7. List of species (and their plant parts) still or no more used to feed animals along with their specific uses and related number of citations.

Species	Plant part	Animals	Number of citations	Obsolete use (O) or present use (P)
<i>Acer opalus</i> Mill. subsp <i>obtusatum</i> (Waldst. & Kit. Ex Willd.) Gams	Leaves	Animals	1	P
<i>Achillea ligustica</i> All.	Plant	Rabbits and other animals	2	P
<i>Alnus cordata</i> (Loisel.) Loisel.	Leaves	Animals	1	P
<i>Ampelodesmos mauritanicus</i> (Poirot) T. Durand et Schinz	Plant	Cows	1	P
<i>Arrhenatherum elatius</i> (L.) Beauv. ex J. et C. Presl s.l.	Plant	Cows	1	P
<i>Avena barbata</i> Potter ex Link	Plant	Animals	1	P
<i>Bituminaria bitumosa</i> (L.) C.H. Stirt.	Plant	Cows, Rabbits and other animals	4	P(O)
<i>Brachypodium phoenicoides</i> (L.) Beauv. ex Roemer et Schultes	Plant	Cows	1	O
<i>Brachypodium retusum</i> (Pers.) P. Beauv.	Plant	Rabbits	1	P
<i>Campanula fragilis</i> Cyr. subsp <i>fragilis</i>	Plant	Rabbits	1	P
<i>Capparis spinosa</i> L. s.l.	Plant	Rabbits	1	P
<i>Castanea sativa</i> Miller	Leaves and branches	Goat, Sheep, Cows and other animals	7	P(O)
	Fruit	Pigs	2	P
<i>Centaurea cineraria</i> L. subsp <i>cineraria</i>	Plant	Animals	2	P
<i>Centranthus ruber</i> (L.) DC.	Plant	Cows, Sheep, rabbits and other animals	17	P(O)
<i>Ceratonia siliqua</i> L.	Fruit	Horses	4	P(O)
	Leaves	Goats	1	P
<i>Chenopodium album</i> L.	Plant	Animals	1	P
<i>Cistus creticus</i> L. subsp. <i>eriocephalus</i> (Viv.) Greuter & Bourdet	Plant	Cows	1	O
<i>Cithmum maritimum</i> L.	Plant	Rabbits	1	P
<i>Cynodon dactylon</i> (L.) Pers.	Plant	Horses	1	P
<i>Dactylis glomerata</i> L. s.l.	Plant	Cows, Rabbits and other animals	2	P
<i>Daucus carota</i> L. s.l.	Plant	Horses	1	O
<i>Emerus major</i> Mill. s.l.	Plant	Goats, Cows and Rabbits	2	P
<i>Erica arborea</i> L.	Branches	Goats, Sheep	2	P
<i>Ferula communis</i> L.	Plant	Sheep and Donkeys	2	P
<i>Fraxinus ornus</i> L. subsp <i>ornus</i>	Leaves and small branches	Animals	2	P

<i>Glaucium flavum</i> Crantz	Plant	Cow	1	P
<i>Helichrysum italicum</i> G. Don. fil. subsp <i>italicum</i>	Plant	Rabbits	1	P
<i>Hordeum murinum</i> L. subsp <i>leporinum</i> (Link) Arcang.	Plant before flowering	Animals	1	P
<i>Hypericum perforatum</i> L.	Plant	Cows	1	O
<i>Juglans regia</i> L.	Leaves	Cows	1	P
<i>Laurus nobilis</i> L.	Fruit	Birds	1	P
<i>Lavatera</i> sp.	Plant	Animals	1	P
<i>Lobularia maritima</i> (L.) Desv. subsp <i>maritima</i>	Plant	Rabbits and other animals	2	P
<i>Myrtus communis</i> L. subsp <i>communis</i>	Leaves	Animals	1	P
<i>Olea europaea</i> L.	Leaves and branches	Goats, Cows and other animals	3	P
<i>Ostrya carpinifolia</i> Scop.	Leaves and branches	Rabbits and other animals	4	P(O)
<i>Parietaria</i> sp. pl. (<i>Parietaria judaica</i> L., <i>Parietaria officinalis</i> L.)	Plant	Hens, Cows, Pigs	8	P(O)
<i>Quercus ilex</i> L.	Leaves and branches	Goats, Cows, rabbits and other animals	11	P(O)
	Fruit	Pigs	4	P(O)
<i>Quercus pubescens</i> Willd. subsp <i>pubescens</i>	Leaves and branches	Rabbits and other animals	4	P(O)
	Fruit	Pigs	3	P(O)
<i>Rhamnus alaternus</i> L.	Branches	Cows and other animals	2	P(O)
<i>Rosmarinus officinalis</i> L.	Branches	Animals	1	P
<i>Silene vulgaris</i> (Moench) Garcke subsp <i>tenoreana</i> (Colla) Soldano & F. Conti	Plant	Animals	2	P
<i>Sonchus oleraceus</i> L.	Plant	Rabbits and Cows	1	P
<i>Ulmus minor</i> Miller s.l.	Leaves and small branches	Animals	1	P
<i>Urtica</i> sp. pl. (<i>Urtica membranacea</i> Poiret ex Savigny, <i>Urtica urens</i> L.)	Plant	Turkeys	1	P
<i>Vitis vinifera</i> L. s.l.	Leaves	Cows	1	P

ATTACHMENT 3.9

Tab. 3.8. List of species (and their plant parts) still or no more used as repellent along with their specific uses and related number of citations.

Plant	Plant part	Use	Number of citations	Obsolete use (O) or present use (P)
<i>Aloysia triphylla</i> Royle	Plant	The plant is used against mosquitoes.	1	P
<i>Citrus limon</i> (L.) Burm.	Fruits	A lemon is put on the bedside table against mosquitoes.	1	P
<i>Laurus nobilis</i> L.	Leaves	Leaves of bay are put in drawers against clothes moths.	1	P
<i>Ocimum basilicum</i> L.	Plant	The plant is widely known and used as repellent for mosquitoes.	6	P
<i>Ruta chalepensis</i> L.	Plant	The plant was macerated in oil which was then rubbed on horse tails to keep rats away and avoid that they may gnaw them.	1	O

ATTACHMENT 3.10

Tab. 3.9. List of species (and their plant parts) still or no more used for veterinary purposes along with their specific uses and related number of citations.

Plant	Plant part	Animal	Use	Number of citations	Obsolete use (O) or present use (P)
<i>Adiantum capillus-veneris</i> L.	Fronds	Cows	Expulsion of placenta	3	O
<i>Allium cepa</i> L.	Bulbs	Animals	Disinfectant	1	O
<i>Allium sativum</i> L.	Bulbs	Animals	Helminthiasis	2	P(O)
<i>Apium graveolens</i> L.	Plant	Horses	Diuretic	1	P
<i>Ceterach officinarum</i> Willd. subsp <i>officinarum</i>	Fronds	Cows	Expulsion of placenta	1	O
<i>Chenopodium album</i> L.	Plant	Animals	After delivery	1	O
<i>Citrus limon</i> (L.) Burm.	Fruit ⁷	Horses	Wounds	1	P
<i>Ficus carica</i> L.	Branches Branches	Rabbit Ruminants	Swelling Stimulating rumination	1 1	P O
<i>Foeniculum vulgare</i> Miller	Plant	Cows	Sickness	1	O
<i>Fraxinus ornus</i> L. subsp <i>ornus</i>	Bark Small branches Bark	Chicks, hens Chicks Pigs	Refreshing Flu Diarrhea	1 1 1	P P O
<i>Linum usitatissimum</i> L.	Seeds Seeds Seeds	Cows Cows Cows	Refreshing Expulsion of placenta Sickness	2 1 1	P(O) P P
<i>Malva</i> sp. pl. (<i>Malva cretica</i> Cav. s.l., <i>Malva neglecta</i> Wallr., <i>Malva sylvestris</i> L. subsp <i>sylvestris</i>)	Roots Plant Plant Plant Plant	Cows Cows Animals Animals Cows	Expulsion of placenta Sickness Stomach problems After delivery Increase milk production	2 2 1 1 1	O O P O O
<i>Opuntia ficus-indica</i> (L.) Miller	Cladodes	Cows	Increase milk production	1	P
<i>Punica granatum</i> L.	Peels	Animals	Diarrhea	1	P
<i>Reichardia picroides</i> Roth	Plant	Animals	After delivery	2	P(O)
<i>Ruta chalepensis</i> L.	Plant	Calves	Swollen knees	1	P
<i>Sonchus oleraceus</i> L.	Plant	Animals	After delivery	1	O
<i>Umbilicus horizontalis</i> DC.	Plant	Animals	After delivery	1	O
<i>Urtica</i> sp. pl. (<i>Urtica membranacea</i> Poirlet ex Savigny, <i>Urtica urens</i> L.)	Plant Plant	Hens Animals	Increase egg production Disinfectant	1 1	P O

⁷ Precisely, the mould that grows on fruits.

ATTACHMENT 3.11

Tab. 3.10. List of species (and their plant parts) still or no more used for cosmetic purposes along with their specific uses and related number of citations.

Plant	Plant part	Use	Number of citations	Obsolete use (O) or present use (P)
<i>Aloysia triphylla</i> Royle	Flowers	To wash the face	1	P
<i>Calamintha nepeta</i> (L.) Savi s.l.	Leaves and small branches	To wash the face	1	P
<i>Citrus limon</i> (L.) Burm.	Juice of the fruit	To illuminate the eyes	1	O
<i>Cucumis sativus</i> L.	Fruit	Purifying	1	O
<i>Mentha</i> sp. pl. (<i>Mentha aquatica</i> L. subsp. <i>aquatica</i> , <i>Mentha spicata</i> L., <i>Mentha x piperita</i> L.)	Leaves and branches	Wash the face	2	P
<i>Myrtus communis</i> L. subsp. <i>communis</i>	Leaves	To wash the face	2	P
<i>Rosa canina</i> L.	Petals	To wash the face	8	P(O)
	Petals	Perfume	1	O
<i>Rosmarinus officinalis</i> L.	Leaves	To wash the face	3	P
<i>Satureja montana</i> L. s.l.	Flowers and flower tops	To wash the face	1	P
<i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i>	Flowers	To wash the face	3	P(O)
<i>Urtica</i> sp. pl. (<i>Urtica membranacea</i> Poir. ex Savigny, <i>Urtica urens</i> L.)	Plant	Dandruff, greasy hair	2	P(O)

ATTACHMENT 3.12

Tab. 3.11. List of species (and their plant parts) still or no more used for ritual or religious purposes along with their specific uses and related number of citations.

Plant	Plant part	Uses	Number of citations	Obsolete use (O) or present use (P)
<i>Allium sativum</i> L.	Bulb	Helminthiasis	1	O
<i>Borago officinalis</i> L.	Flowers	Processions	1	P
<i>Calystegia silvatica</i> (Kit. in Schrad) Griseb.	Flowers	Processions	1	P
<i>Centaurea cineraria</i> L. subsp <i>cineraria</i>	Flowers	Processions	1	P
<i>Centranthus ruber</i> (L.) DC. subsp <i>ruber</i>	Flowers	Processions	1	P
<i>Chamaerops humilis</i> L.	Leaves	Easter wickerwork	4	P
<i>Citrus sinensis</i> (L.) Osbeck	Flowers	Garlands	1	O
<i>Myrtus communis</i> L. subsp <i>communis</i>	Leaves	Garlands	1	O
<i>Olea europaea</i> L.	Oil	Evil-eye ⁸	2	P
	Branches	Good auspices	1	P
<i>Opuntia ficus-indica</i> (L.) Miller	Cladodes	Abdominal pain	1	O
<i>Quercus pubescens</i> Willd. subsp <i>pubescens</i>	Branches	Leg swollen	1	O
	Tree	Hernia	1	O
<i>Ruta chalepensis</i> L.	Plant	Helminthiasis	1	O
<i>Solanum tuberosum</i> L.	Tuber	To keep witches away	2	O
<i>Urospermum dalechampii</i> Scop.	Flower	Processions	1	P
<i>Triticum aestivum</i> L.	Seeds	Abdominal pain	1	O
<i>Viscum album</i> L.	Plant	Good auspices	1	P

⁸ The evil-eye (*malocchio*) refers to the ability of the human eye to cause, or at least to project, harm when it is directed by certain individuals towards others (Pieroni and Giusti, 2002a).

ATTACHMENT 3.13

Tab. 3.12. List of species (and their plant parts) still or no more used for ornamental purposes along with their specific uses and related number of citations.

Plant	Plant part	Use	Number of citations	Obsolete use (O) or present use (P)
<i>Antirrhinum siculum</i> Miller	Plant	In pots	1	P
<i>Calystegia silvatica</i> (Kit. in Schrad) Griseb.	Flowered branches	In a jar	1	P
<i>Campanula dichotoma</i> L.	Plant	In pots	1	P
<i>Hedera helix</i> L. subsp <i>helix</i>	Plant	In gardens	1	P
<i>Hypericum perforatum</i> L.	Flowered branches	In a jar	1	P
<i>Myrtus communis</i> L. subsp <i>communis</i>	Plant	In gardens	1	P
<i>Rosmarinus officinalis</i> L.	Plant	In gardens	1	P
<i>Spartium junceum</i> L.	Flowered branches	In a jar	1	P

ATTACHMENT 3.14

Tab. 3.13. List of species (and related plant part) which are theme of a stories (actual or obsolete) and related number of citations.

Plant	Plant part	Stories	Number of citations	Obsolete use (O) or present use (P)
<i>Ceratonia siliqua</i> L.	Fruit	Each plant in the village of Conca dei Marini had a specific name in the past and was used to identify places.	1	O
<i>Juglans regia</i> L.	Seed	“A San Lorenzo la noce prende il senso”	1	P
<i>Ruta chalepensis</i> L.	Plant	“La ruta ogni male stuta”	10	P
<i>Vitis vinifera</i> L. s.l.	Fruit	“A San Martino ogni fusto diventa vino”	1	P

Tab. 3.14. List of species (and their plant parts) still or no more used for games along with their specific uses and related number of citations.

Plant	Plant part	Use	Number of citations	Obsolete use (O) or present use (P)
<i>Avena barbata</i> Potter ex Link	Stem	Lasso	1	O
<i>Ceratonia siliqua</i> L.	Seed	“Tombola”	1	O
<i>Hordeum murinum</i> L. subsp. <i>leporinum</i> (Link) Arcang.	Spikes	Joke	1	O
<i>Lagurus ovatus</i> L. s.l.	Spikes	Moustache	1	O
<i>Silene vulgaris</i> (Moench) Garcke subsp. <i>tenoreana</i> (Colla) Soldano & F. Conti	Flower	Joke	4	P(O)
<i>Symphytum bulbosum</i> K. F. Schimper	Flower	Flower is sucked	1	O

ATTACHMENT 3.15

Tab. 3.18. Geographical distribution of TK (considering the average citation number for each informants) and the surface of cultivated land and woodland along with the total surface of the area.

Municipality	Average of citations for each informants	Cultivated land surface (ha) (ISTAT, 2001)	Woodland surface (ha) (Cancellieri and Caneva, in press)	Municipality surface (ha) (ISTAT, 2001)	Percentage of cultivated land on total surface	Percentage of woodland on total surface
Agerola	8,6	326,92	509,69 (ISTAT, 2001)	1962	17%	26%
Amalfi	11,5	93,56	210,9	611	15%	35%
Atrani	7,7	2,41	2,01 (reforestation)	20	12%	10%
Cetara	7,6	40,75	140,8	492	8%	29%
Conca dei Marini	8,1	19,41	5,2	102	19%	5%
Corbara	11,5	79,91	411,86	663	12%	62%
Furore	8	28,23	12,25	170	17%	7%
Maiori	7,8	96,55	555,77	1642	6%	34%
Minori	12,2	72,03	123,66	256	28%	48%
Positano	15,6	127,87	292,06	842	15%	35%
Praiano	10,5	55,95	6,68	266	21%	3%
Ravello	7,5	141,5	281,53	799	18%	35%
Sant'Egidio del Monte Albino	9,4	249,21	126,14	624	40%	20%
Scala	14,7	154,39	753,37	1306	12%	58%
Tramonti	8,9	392,76	1022,59	2473	16%	41%
Vietri sul Mare	6,5	74,87	417,96	900	8%	46%

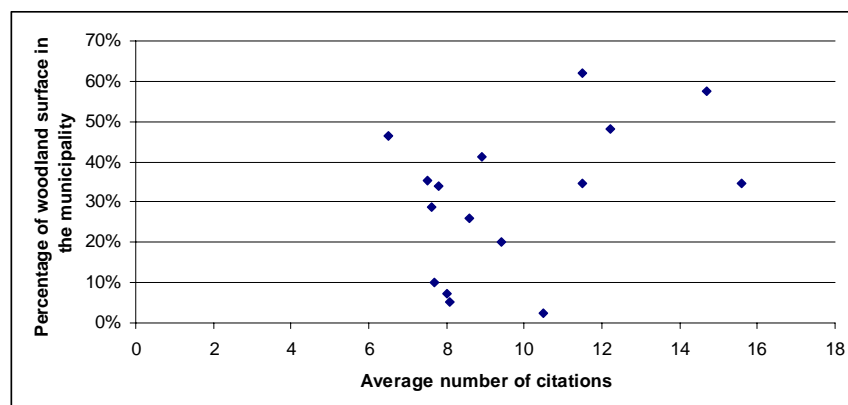


Fig. 3.8. Average number of informants in relation to the percentage of woodland surface in the municipality.

Tab. 3.19. Farm surface within or outside protected areas in Amalfi Coast.

Municipality	Total SAU	SAU within a Protected area	Surface of uncultivated land	Surface of uncultivated land within a protected area
Agerola	326,92	0,68	3,18	0
Amalfi	93,56	91,86	56,28	55,28
Atrani	2,41	2,41	0	0
Cetara	40,75	0	4,43	0
Conca dei Marini	19,41	19,38	6,77	6,77
Corbara	79,91	0	9,17	0
Furore	28,23	27,68	11,26	10,93
Maiori	96,55	96,04	6,75	6,75
Minori	72,03	69,99	9,95	9,95
Positano	127,87	126,55	18,45	18,15
Praiano	55,95	55,35	33,77	33,63
Ravello	141,5	139,68	7,38	7,28
Sant'Egidio del Monte Albino	249,21	0,2	1,07	0
Scala	154,39	32,42	27,49	0,94
Tramonti	392,76	0	105,23	0
Vietri sul Mare	74,87	2,13	37,34	2,8
Total	1.956,32	664,37	338,52	152,48